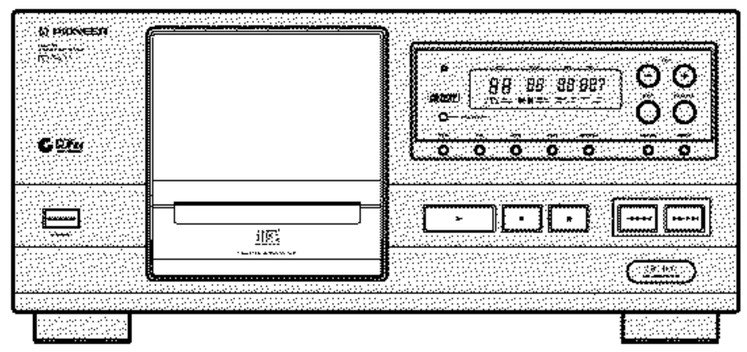
Service Manual

PIONEER®
The Art of Entertainment

PD-F607



ORDER NO.
RRV1877

FILE-TYPE CD PLAYER

PD-F607
PD-F507
PD-F407

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model			Power Requirement	Remarks
	PD-F607	PD-F507	PD-F407		
KUXJ	○	○	○	AC120V	
KCXJ	○	○	○	AC120V	

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PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923

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T-ZZE DEC. 1997 Printed in Belgium

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

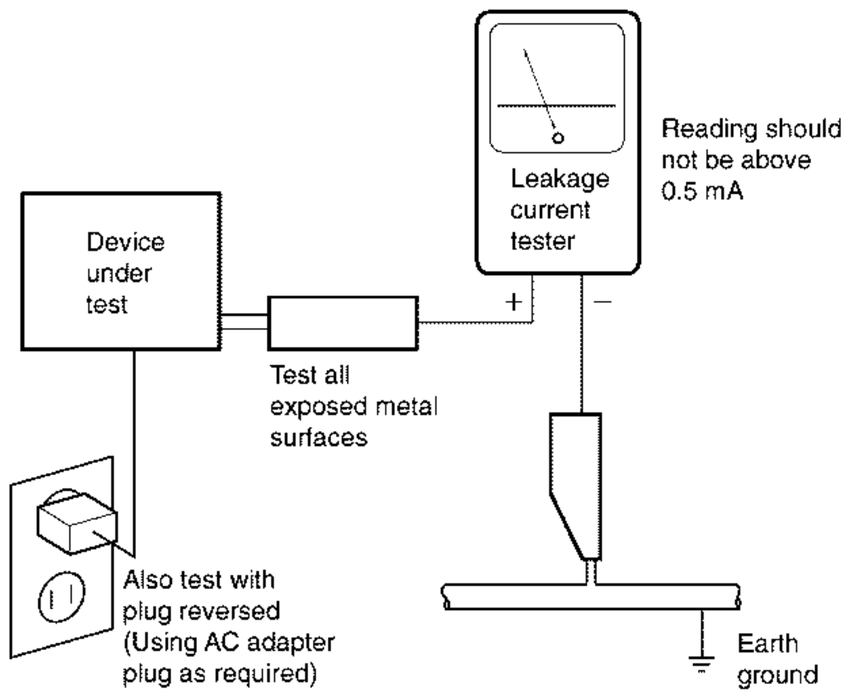
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Reading should not be above 0.5 mA
Leakage current tester
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

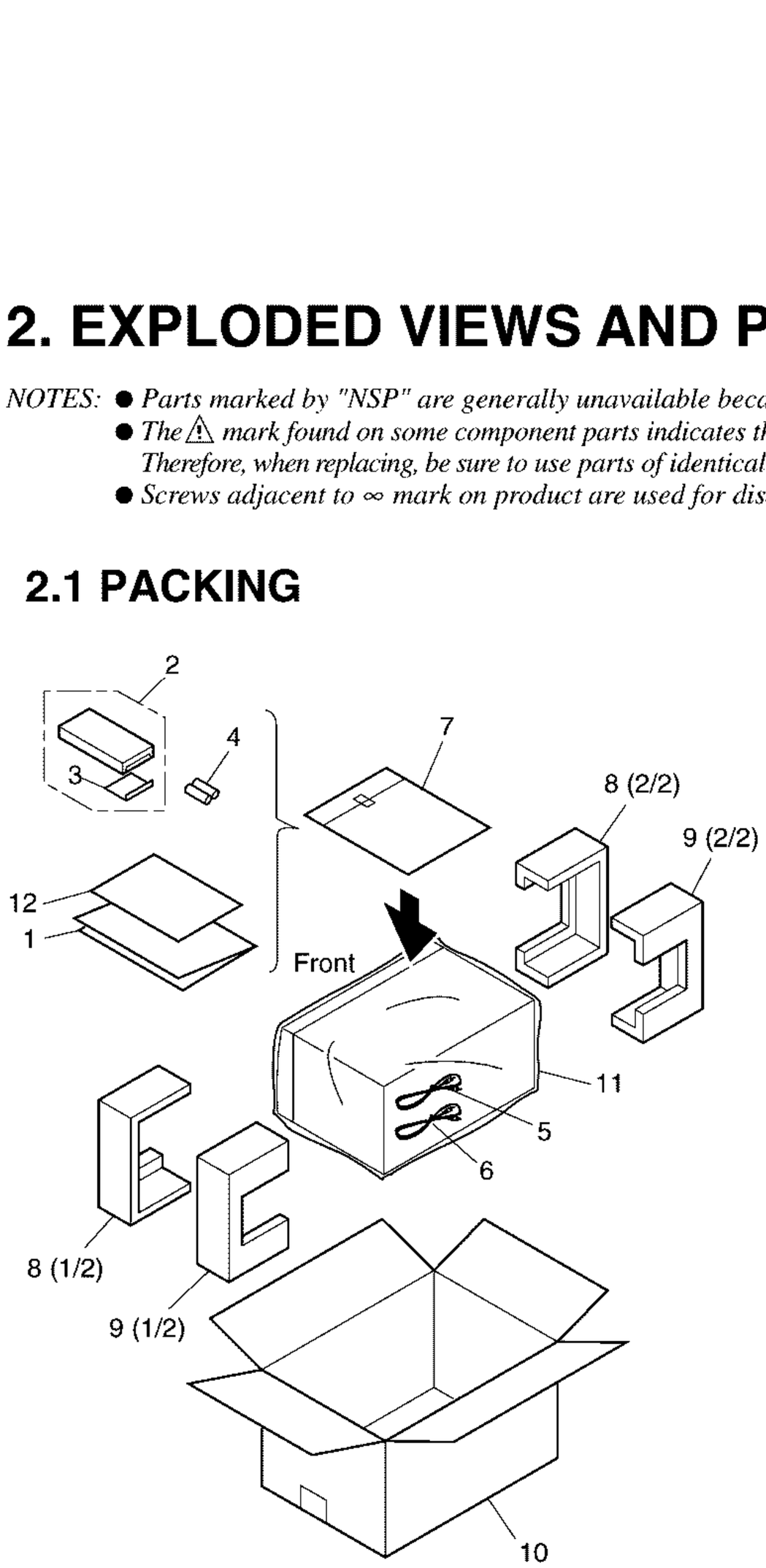
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS AND PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *Screws adjacent to ∞ mark on product are used for disassembly.*

2.1 PACKING



(1)PACKING PARTS LIST

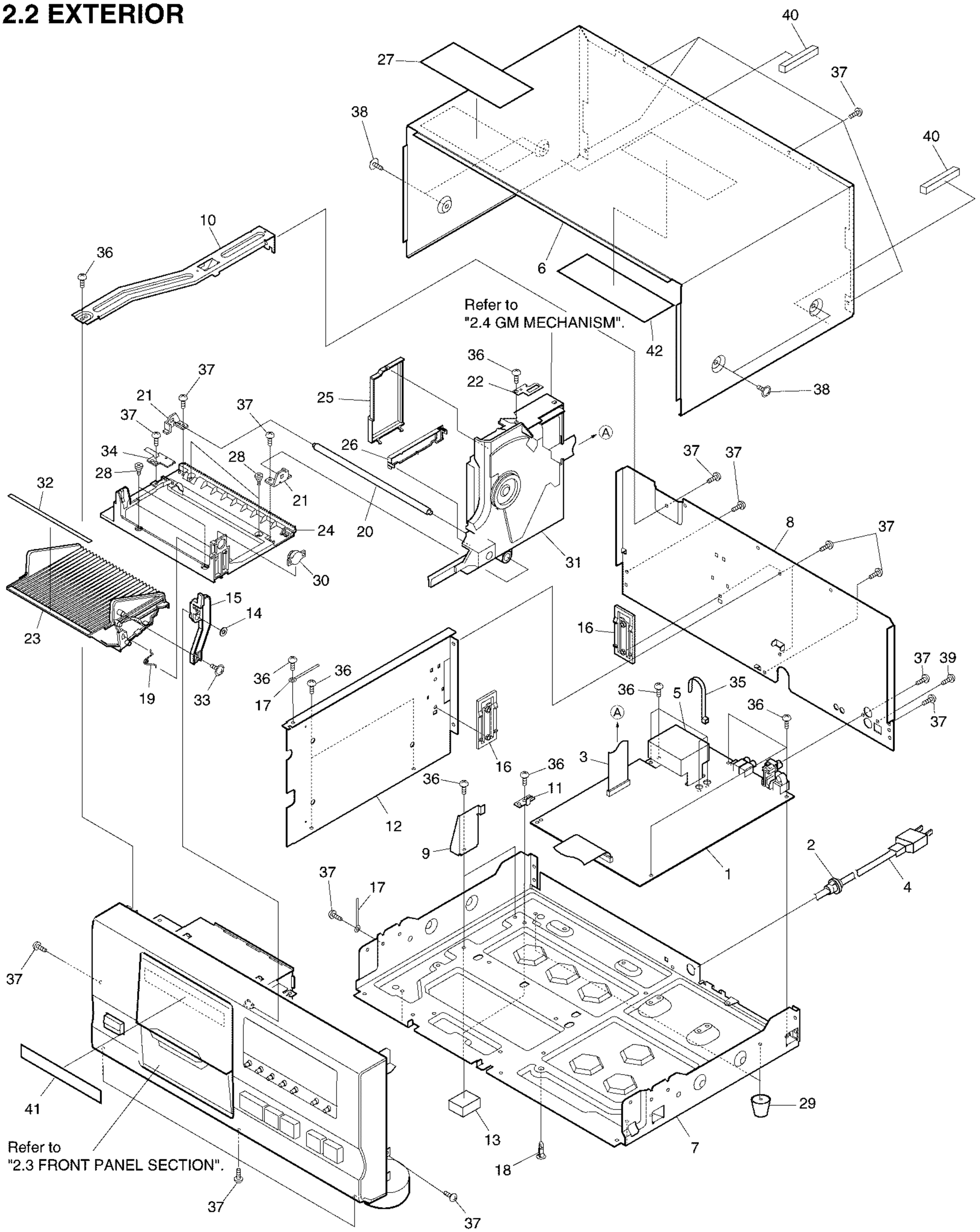
Mark	No.	Description	Parts No.
	1	Operating Instructions (English)	See Contrast table (2)
	2	Remote Control Unit	See Contrast table (2)
	3	Battery Cover	See Contrast table (2)
NSP	4	Battery (R6P, AA)	See Contrast table (2)
	5	Control Cable (L=1.0m)	PDE1247
	6	Output Cable (L=1.0m)	PDE1248
	7	Polyethylene Bag (230x340x0.03)	See Contrast table (2)
	8	Protector F	PHA1323
	9	Protector R	PHA1324
	10	Packing Case	See Contrast table (2)
	11	Packing Sheet	AHG7010
NSP	12	Warranty Card	See Contrast table (2)

(2) CONTRAST TABLE

PD-F607/KUXJ,KCXJ,PD-F507/KUXJ,KCXJ,PD-F407/ KUXJ and KCXJ are constructed same except for the following:

Mark	No.	Description	Part No.						Remarks
			PD-F607		PD-F507		PD-F407		
			KUXJ	KCXJ	KUXJ	KCXJ	KUXJ	KCXJ	
	1	Operating Instructions (English)	PRB1262	Not used	PRB1265	Not used	PRB1265	Not used	
	1	Operating Instructions (English/French)	Not used	PRE1265	Not used	PRE1266	Not used	PRE1266	
	2	Remote Control Unit(CU-PD091)	PWW1131	PWW1131	Not used	Not used	Not used	Not used	
	2	Remote Control Unit(CU-PD090)	Not used	Not used	PWW1132	PWW1132	Not used	Not used	
	3	Battery Cover	AZA7204	AZA7204	AZA7204	AZA7204	Not used	Not used	
NSP	4	Battery (R6P, AA)	AEX–010	AEX–010	AEX–010	AEX–010	Not used	Not used	
	7	Polyethylene Bag (230x340x0.03)	Z21–038	Z21–038	Z21–038	Z21–038	Not used	Not used	
	10	Packing Case	PHG2282	PHG2297	PHG2301	PHG2302	PHG2293	PHG2294	
NSP	12	Warranty Card	ARY1051	ARY1075	ARY1051	ARY1075	ARY1051	ARY1075	

2.2 EXTERIOR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Refer to
"2.4 GM MECHANISM".
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Refer to
"2.3 FRONT PANEL SECTION".
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(1) EXTERIOR PARTS LIST

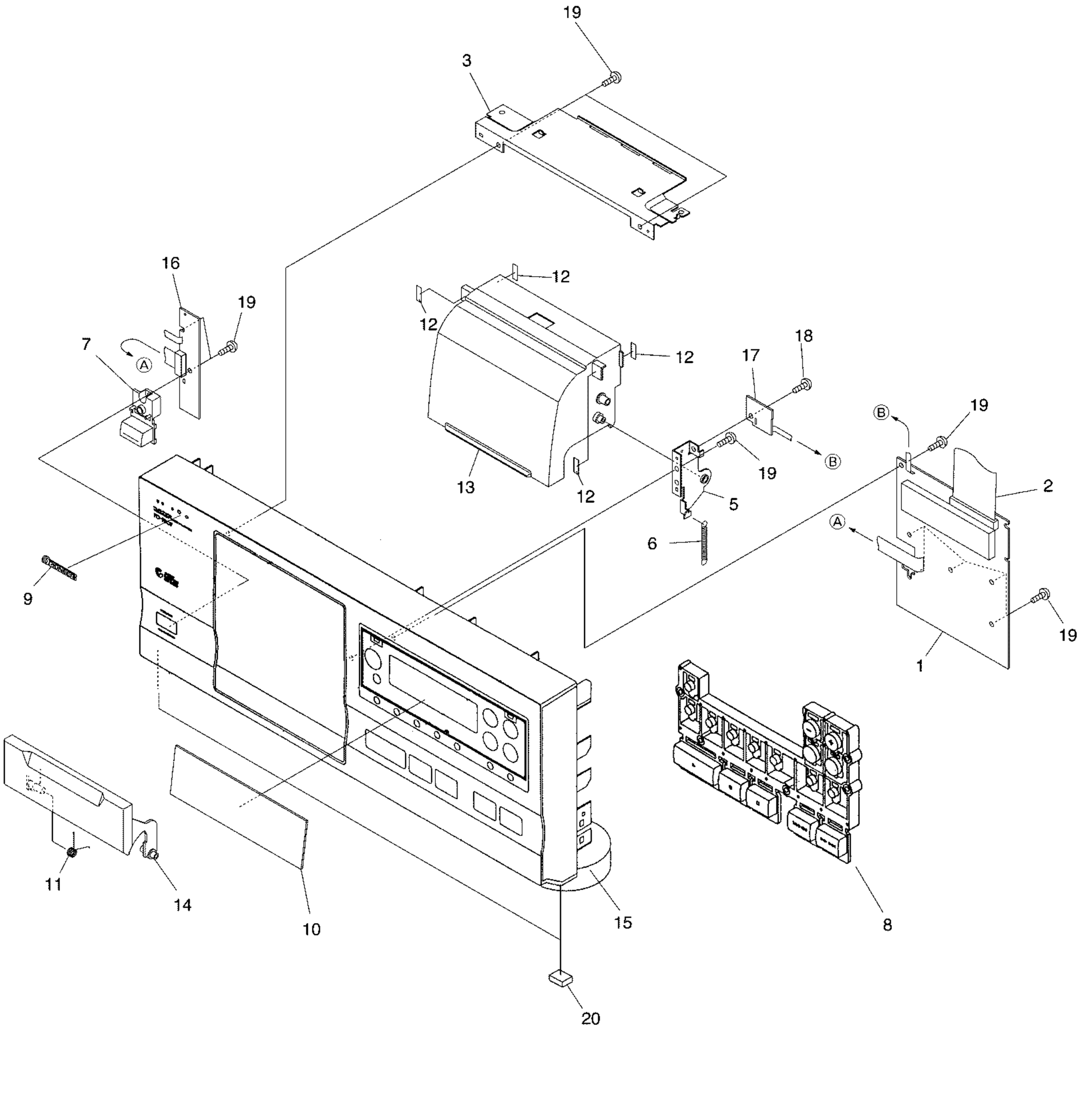
Mark	No.	Description	Parts No.
⚠	1	MOTHER BOARD ASSY	See Contrast table (2)
⚠	2	Cord Stopper	CM–22C
	3	25P F.F.C./30V	PDD1184
⚠	4	AC Power Cord	PDG1015
⚠	5	Power Transformer	PTT1237
	6	Bonnet	PYY1225
NSP	7	Under Base	PNA2249
	8	Rear Base	See Contrast table (2)
	9	F. B Stopper	PNB1565
	10	Home Lock Angle 56	PNB1573
	11	Home Lock Angle 2	PNB1549
	12	Barrier	PNB1550
	13	Disc Guard	REC1305
	14	Link Spacer	PEB1292
	15	Link	PNW2614
	16	FFC Holder	PNW2615
	17	Cord Clamper	RNH–184
	18	Locking Card Spacer	VEC1596
	19	Rack Spring	ABH7057
	20	Guide Shaft–25	ALA7007
	21	Shaft Holder	ANB7021
	22	Assist Angle 2	ANB7065
	23	Disc Rack	ANW7069
	24	Rack Base S	ANW7070
	25	Servo Cover	ANW7073
	26	Nice Cover	ANW7074
	27	Caution Label 25	PRW1423
	28	Screw C	PBA1106
	29	Foot	REC1263
	30	Damper Assy 80	PXA1584
NSP	31	GM Mechanism	PXA1590
	32	Disc Rack Panel	AAK7251
	33	Screw	IBZ30P080FMC
NSP	34	HOME SW ASSY	PWZ3627
	35	Binder	ZCA–SKB90BK
	36	Screw	BBZ30P060FMC
	37	Screw	BBZ30P080FZK
	38	Screw	FBT40P080FZK
	39	Screw	See Contrast table (2)
	40	FFC Spacer	PEB1291
	41	Getter Label U607	See Contrast table (2)
	42	65 Label	See Contrast table (2)

(2) CONTRAST TABLE

PD-F607/KUXJ,KCXJ,PD-F507/KUXJ,KCXJ,PD-F407/ KUXJ and KCXJ are constructed same except for the following:

Mark	No.	Description	Part No.						Remarks
			PD-F607		PD-F507		PD-F407		
			KUXJ	KCXJ	KUXJ	KCXJ	KUXJ	KCXJ	
⚠	1	MOTHER BOARD ASSY	PWM2199	PWM2199	PWM2193	PWM2193	PWM2189	PWM2189	
	8	Rear Base	PNA2386	PNA2386	PNA2401	PNA2401	PNA2395	PNA2395	
	39	Screw	BBZ30P080FZK	BBZ30P080FZK	BBZ30P080FZK	BBZ30P080FZK	Not used	Not used	
	41	Getter Label U607	PRW1487	PRW1487	PRW1475	PRW1475	PRW1475	PRW1475	
	42	65 Label	ORW1069	Not used	ORW1069	Not used	ORW1069	Not used	

2.3 FRONT PANEL SECTION



(1) FRONT PANEL SECTION PARTS LIST

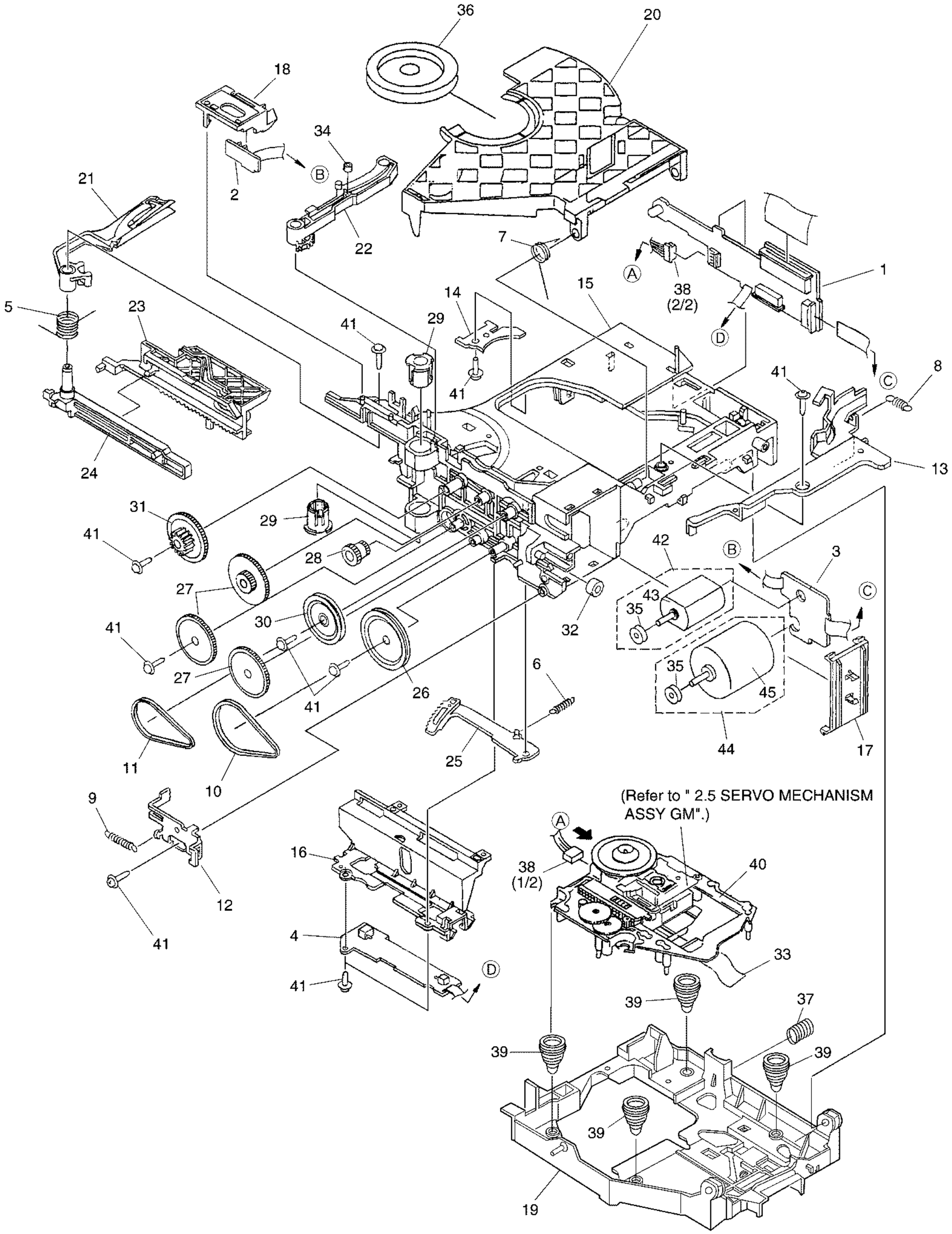
Mark	No.	Description	Parts No.
NSP	1	DISPLAY ASSY	See Contrast table (2)
	2	38P F.F.C./30V	See Contrast table (2)
	3	Panel Angle	PNB1545
	4	•••••	
	5	Hood Angle R	PNB1547
	6	Link Spring	PBH1215
	7	Power Button	PAC1869
	8	Operate Button	See Contrast table (2)
	9	Name Plate	PAM1755
	10	Display Window	See Contrast table (2)
	11	Door Spring	PBH1216
NSP	12	Cushion (ART. SUEDE)	PED1016
	13	Hood	PNW2759
	14	Door	PNW2758
	15	Control Panel	See Contrast table (2)
NSP	16	POWER SW ASSY	PWZ3622
NSP	17	HOOD SW ASSY	PWZ3629
	18	Screw	BBZ30P080FZK
	19	Screw	PPZ30P080FMC
	20	Rubber Sheet	AEB1111

(2) CONTRAST TABLE

PD-F607/KUXJ,KCXJ,PD-F507/KUXJ,KCXJ,PD-F407/ KUXJ and KCXJ have the same construction except for the following:

Mark	No.	Description	Part No.						Remarks
			PD-F607		PD-F507		PD-F407		
			KUXJ	KCXJ	KUXJ	KCXJ	KUXJ	KCXJ	
	1	DISPLAY ASSY	PWZ3612	PWZ3612	PWZ3610	PWZ3610	PWZ3607	PWZ3607	
	2	38P F.F.C./30V	PDD1169	PDD1169	Not used	Not used	Not used	Not used	
	2	34P F.F.C./30V	Not used	Not used	PDD1168	PDD1168	Not used	Not used	
	2	32P F.F.C./30V	Not used	Not used	Not used	Not used	PDD1167	PDD1167	
	8	Operate Button	PAC1858	PAC1858	PAC1857	PAC1857	PAC1857	PAC1857	
	10	Display Window	PAM1740	PAM1740	PAM1747	PAM1747	PAM1746	PAM1746	
	15	Control Panel	PNW2756	PNW2756	PNW2783	PNW2783	PNW2778	PNW2778	

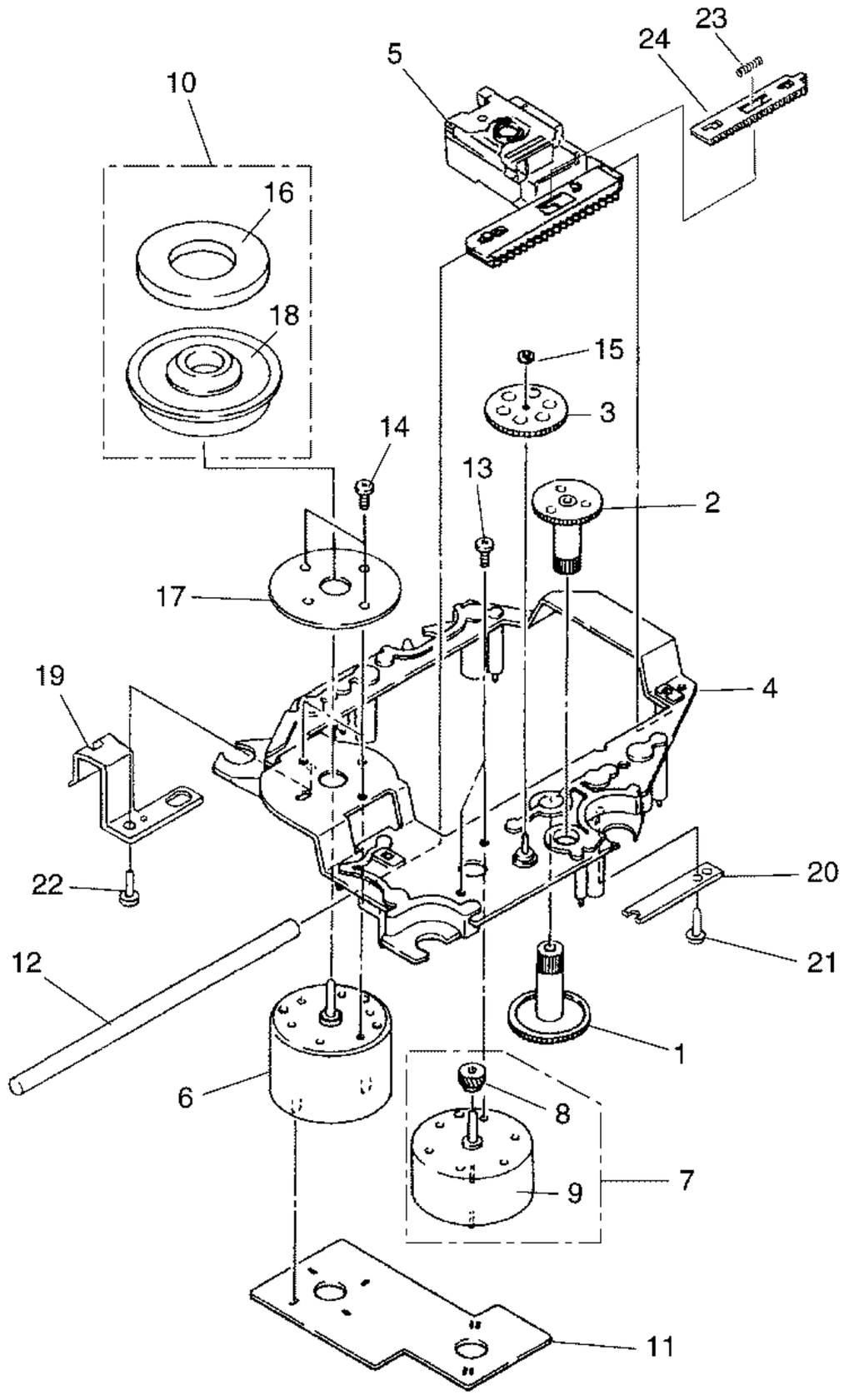
2.4 GM MECHANISM



GM MECHANISM PARTS LIST

Mark	No.	Description	Parts No.
NSP	1	MECHA PCB ASSY	PWZ3395
NSP	2	SENSOR PCB ASSY	PWZ3397
NSP	3	MOTOR PCB ASSY	PWZ3398
NSP	4	SW PCB ASSY	PWZ3399
	5	Arm A Spring 2	ABH7124
	6	Gear Plate Spring	ABH7051
	7	Clamp Spring	ABH7107
	8	Lock Lever Spring B	ABH7142
	9	Lockangle Spring 2	ABH7123
	10	Loading Belt	AEB7029
	11	Belt	AEB7030
NSP	12	Lock Angle	ANB7027
NSP	13	Lock Lever P	ANB7042
NSP	14	Servo Stopper S	ANB7047
	15	Loading Base	ANW7086
	16	Cam Cover	ANW7052
	17	Motor Holder	ANW7053
	18	Sensor Holder	ANW7054
	19	Float Base	PNW2700
	20	Clamper Holder	ANW7117
	21	Arm (A)	ANW7057
	22	Arm (B)	ANW7058
	23	Drive Plate	ANW7059
	24	Arm Plate	ANW7060
	25	Gear Plate	ANW7082
	26	Gear Pulley (B)	ANW7062
	27	Gear A	ANW7063
	28	Drive Gear	ANW7064
	29	Bearing	ANW7065
	30	Gear Pulley (A)	ANW7066
	31	Select Gear	ANW7067
	32	Roller	ANW7068
	33	16P F.F.C/30V	PDD1182
	34	Roller B	ANW7075
	35	Motor Pulley	PNW1634
	36	Clamper	PNW2744
	37	Float Spring	ABH7049
	38	Connector Assy (4P)	ADE7006
	39	Float Rubber	AEB7059
NSP	40	Servo Mechanism Assy GM	PXA1591
	41	Screw	IPZ20P080FMC
	42	Motor Assy	AEA7005
NSP	43	Motor	PXM1002
	44	Motor Assy	AEA7006
	45	Loading Motor	VXM1034
		Froil (for service)	GYA1001
		Ha Narl (for service)	GEM1016

2.5 SERVO MECHANISM ASSY GM



SERVO MECHANISM ASSY GM PARTS LIST

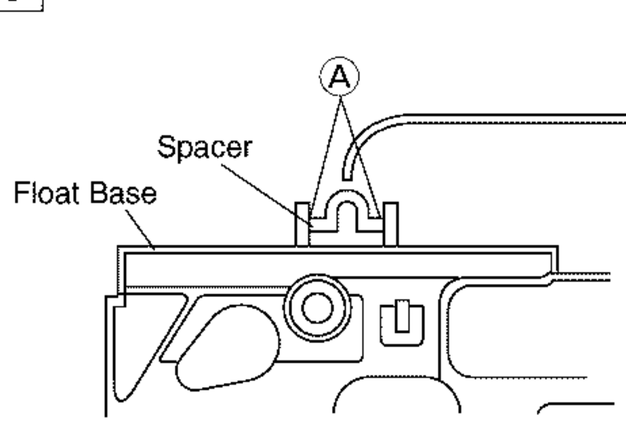
Mark	No.	Description	Parts No.
	1	Gear 1	PNW2052
	2	Gear 2	PNW2053
	3	Gear 3	PNW2054
	4	Carriage Base	PNW2699
	5	Pickup Assy-S	PEA1335
	6	D. C. Motor Assy (Spindle)	PEA1235
	7	Carriage DC Motor Assy	PEA1246
	8	Pinion Gear	PNW2055
	9	Carriage DC Motor/0.3W	PXM1027
	10	Disc Table Assy	PEA1314
NSP	11	Mechanism Board Assy	PWX1192
	12	Guide Bar	PLA1094
	13	Screw	JFZ17P025FZK
	14	Screw	JFZ20P040FMC
	15	Washer	WT12D032D025
	16	Clamp Magnet	PMF1014
	17	Yoke M	PNB1312
NSP	18	Disc Table	PNW2410
NSP	19	Float Angle	ANB7020
	20	Gear Stopper	PNB1303
	21	Screw	BPZ20P060FMC
	22	Screw	BPZ26P100FMC
	23	PU Rack Spring	ABH7077
	24	Rack Holder	PNW2056
		Froil (for service)	GYA1001
		Ha Narl (for service)	GEM1016

● How to Install the Disc Table

1 Use nipper or other tool to cut the two sections marked Ⓐ figure 1.

2 While supporting the spindle motor shaft with the stopper, put spacer on top of the yoke M, and stick the disc table on top (takes about 9kg pressure). Take off the spacer.

1



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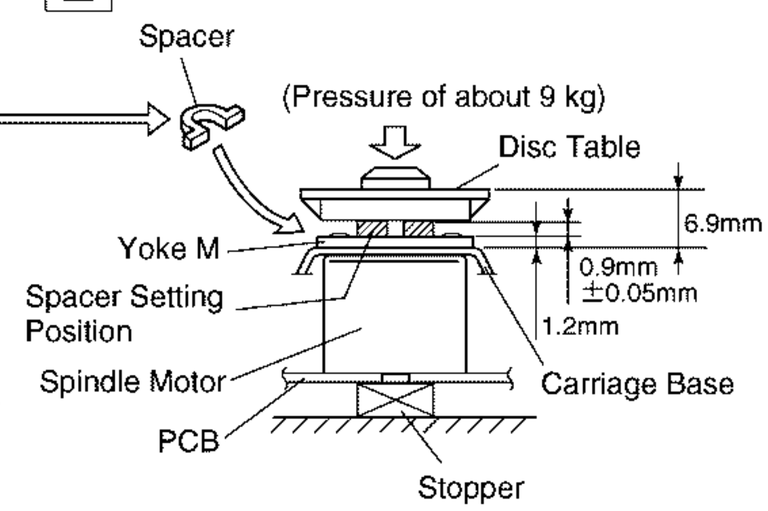


3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTIONS,MECHANISM BOARD,DISPLAY,POWER SW, HOME SW,HOOD SW,MECHA PCB,SENSOR PCB,MOTOR PCB AND SW PCB ASSEMBLIES

SIGNAL ROUTE

(F): FOCUS SERVO LOOP LINE
(T): TRACKING SERVO LOOP LINE
(L): LOADING MOTOR ROUTE
(S): SPINDLE MOTOR ROUTE
(C): CARRIAGE MOTOR ROUTE

DISPLAY ASSY
S702 : TITLE DISPLAY
S703 : CLEAR
S704 : TIME
S705 : ▶ PLAY
S706 : MODE
S707 : HI-LITE
S708 : PROGRAM
S709 : ⏸ PAUSE
S710 : ■ STOP
S712 : RANDOM
S713 : REPEAT
S714 : ⏮ ◀◀ REV
S715 : ▶▶ ⏭ FWD
S717 : DISC -
S718 : DISC +
S719 : BEST
S720 : PREVIOUS

SUB BOARD ASSY
PD-F607:PWX1540
PD-F507:PWX1537
PD-F407:PWX1534

GM MECHANISM (PXA1590)

SERVO MECHANISM ASSY GM (PXA1591)

PICK UP ASSY PEA1335
16P FFC PDD1180
LASER DIODE
MD LD
LD 1
GND 2
MD 3
A 4
B 5
C 6
D 7
F 8
OEIC D1 D2 D3 D4 D5 D6
9 VCC 9
10 VC 10
GND 11
12
E 12
TRACKING COIL INSIDE (T) TRK- 13
OUTSIDE (T) TRK+ 14
FOCUS COIL HEAR (F) FCS+ 15
FAR (F) FCS- 16
CN102 SFW16P-25T

A MECHANISM BOARD ASSY (PWX1192)
S610 DSG1016 INSIDE SW
SPDL MTR PEA1235 (S)
CARRIAGE MTR PEA1246 (C)
INSD 1
SPDR 2
CADR 3
GND 4
173979-4
CN610

D
DSG1048 S811
HOME SW ASSY PWZ3622
J811 D20PWW0320E
S751 STANBY/ON
ASG1030
SA KD0 HOME GND

C
POWER SW ASSY PWZ3622

E
DSG1015 S821
HOOD
J821 D20PWW0305E
HOOD SW ASSY PWZ3629

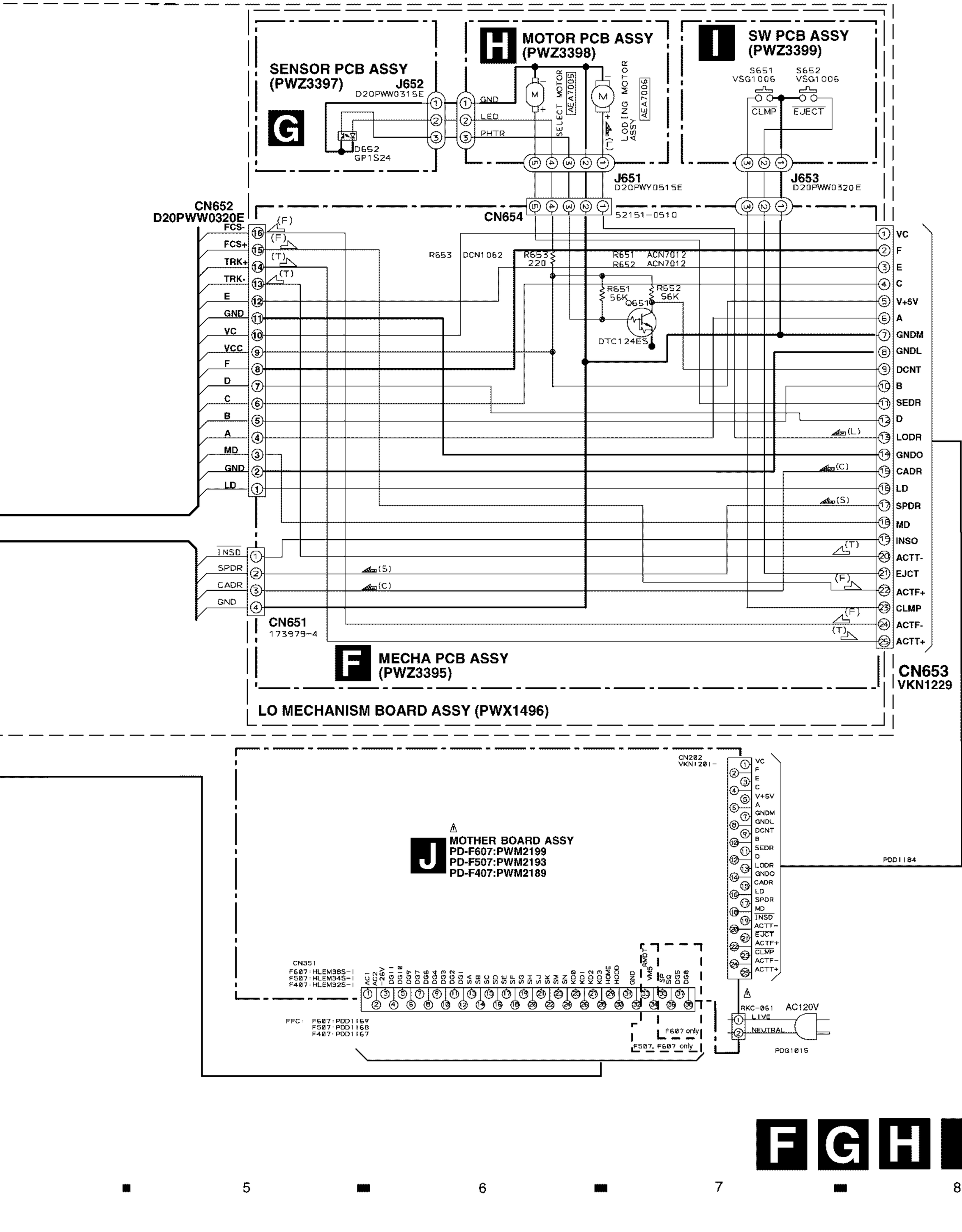
J801 D20PWW0445E
D701 D702 D703 D704 D705 1SS254
F607 only
S702 DISPLAY S703 CLEAR S704 TIME S705 PLAY
S706 MODE S707 HI-Lite S708 PGM S709 PAUSE S710 STOP
S712 RANDOM S715 FWD S714 REW S713 REPEAT
S717 DISC- S718 DISC+ S719 BEST S720 PREVIOUS
KD0 KD1 KD2 KD3
S702–S710, S712–S715, S717–S720: ASG1030

CN701 F607:HLEM38R-1
F507:HLEM34R-1
F407:HLEM32R-1
AA
F407, F507 only
W101 W102 W103 W104
FLUORESCENT DISPLAY
V701 PEL1089-A
C701 0.01
GP1U27X
F607 only
F507, F607 only

B DISPLAY ASSY PD-F607:PWZ3612
PD-F507:PWZ3610
PD-F407:PWZ3607

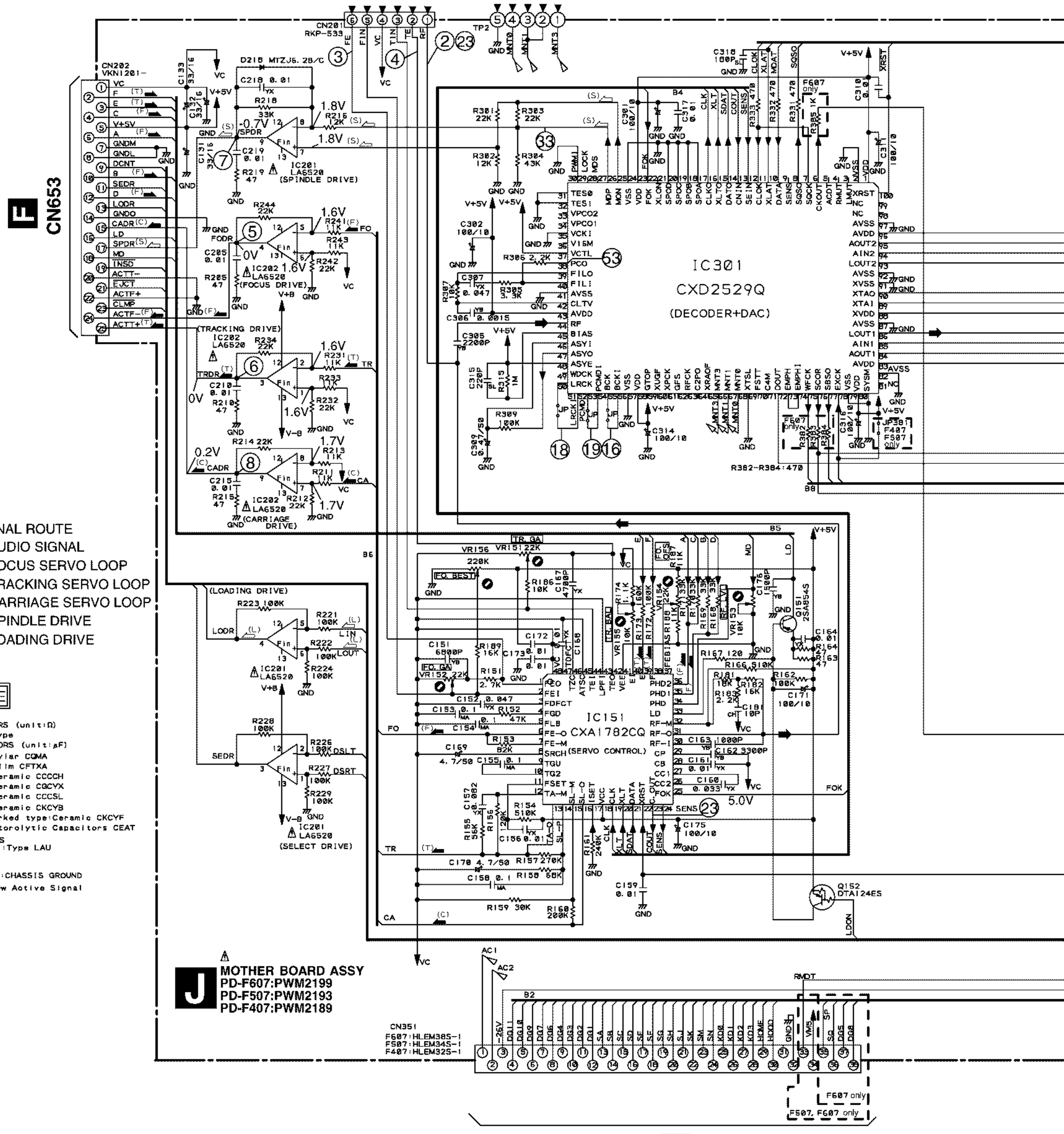
A B C D E

Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST"



F G H I

3.2 MOTHER BOARD ASSY

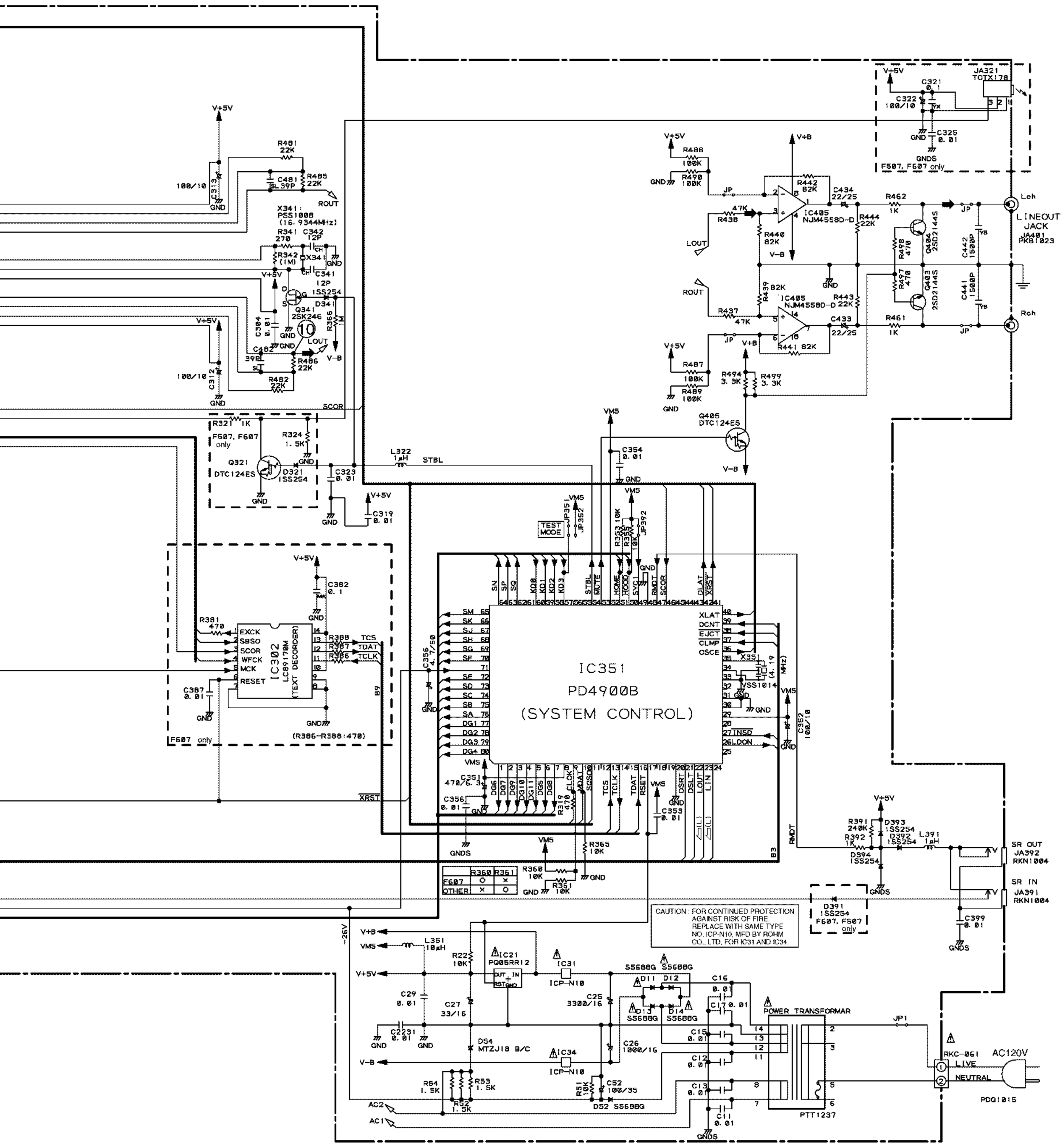


IC301 (CXD2529Q)

PIN No.	1	2to4	7	8	9	10	11	12	13	14	16	17	23	24	25	26	27	38	39	40	41	42	43
Voltage(V)	5	0	4.7	1.2-1.4	1.2-1.4	4.4	5	4.7	4.7	0.05	5	4.7	5	5	0	5	2.6-2.7	2.5	3.1	2.5	0	3.1	5

PIN No.	44	45	46	47	48	50to55	56	57	61	71	75	78	79	82	83	84to86	87	88	89,90	91,92	93to95	96	97	100
Voltage(V)	2.5	0.9	2.5	2.5	5	2.5	0	5	5	2.5	0	0	5	0	5	2.5	0	5	2.5	0	2.5	5	0	5

PD-F607, PD-F507,PD-F407

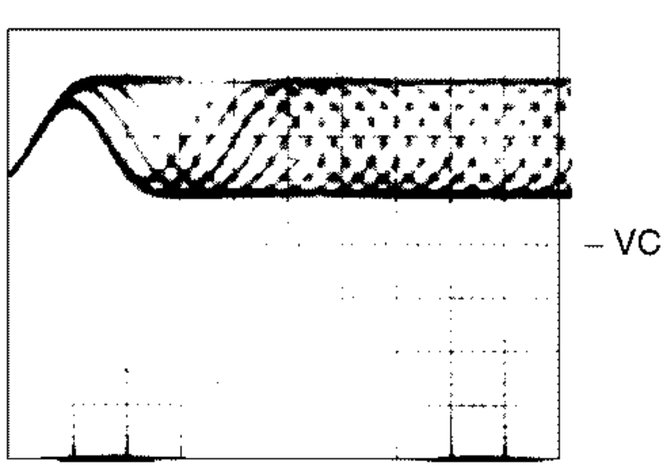


Waveforms

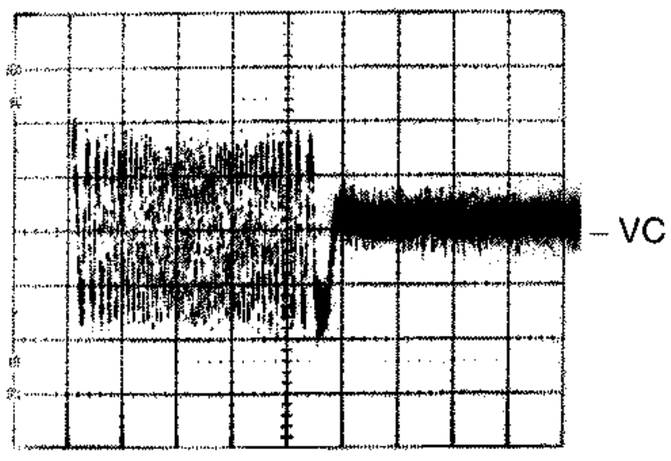
Note : The encircled numbers denote measuring points in the schematic diagram.

*1 50T-JUMP : After switching to the pause mode, Press the manual search key.
*2 FOCUS-IN : Press the key without loading a disc.

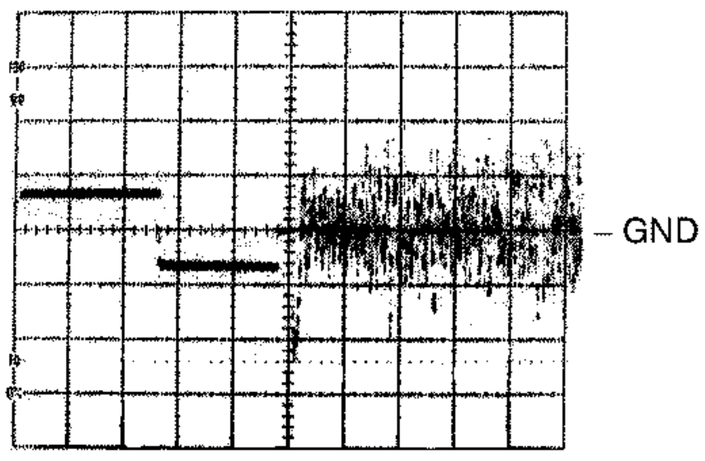
② TP1-Pin 1 : PLAY MODE (RF)
500mV/div 500nsec/div



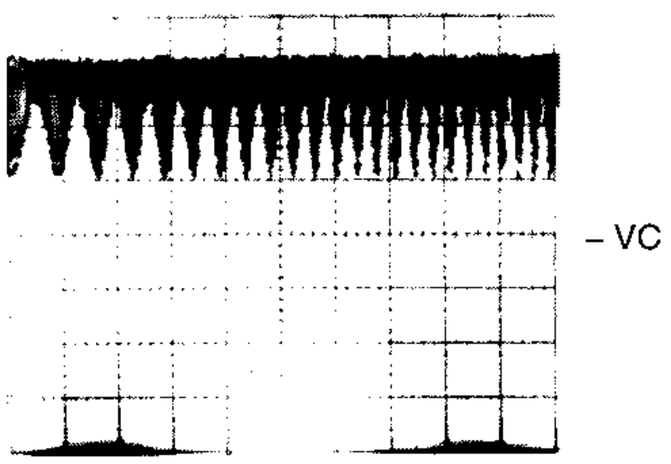
④' TP1-Pin 2 : 50T - JUMP (*1) MODE (TRER)
200mV/div 1msec/div



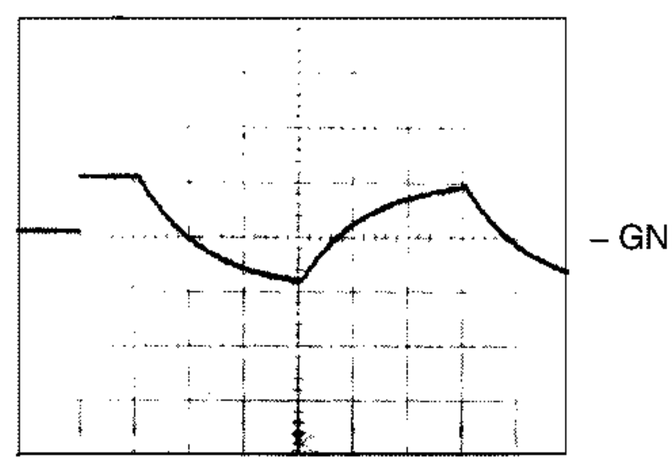
⑥' IC202-Pin 3 : 50T - JUMP (*1) MODE (TRDR)
500mV/div 1msec/div



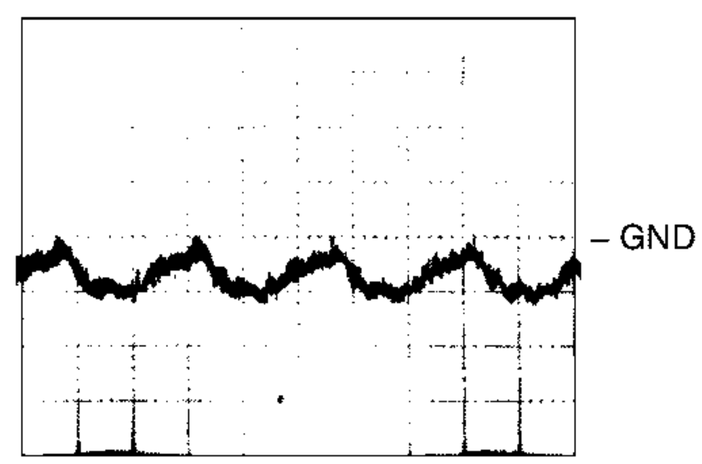
② TP1-Pin 1 : TRACK SEARCH MODE (RF)
500mV/div 200µsec/div



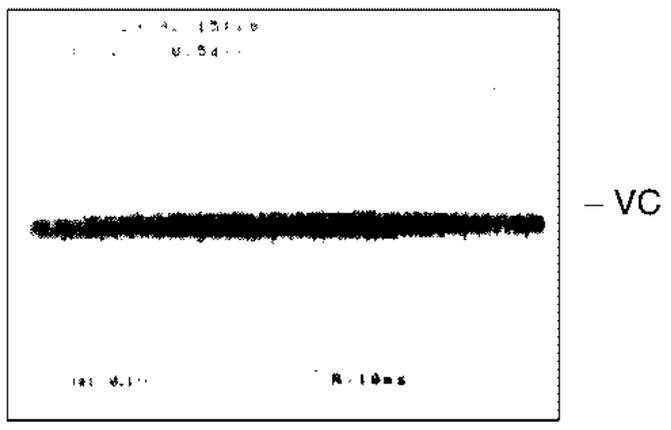
⑤ IC202-Pin 4 : FOCUS-IN (*2) MODE (FODR)
1V/div 200msec/div



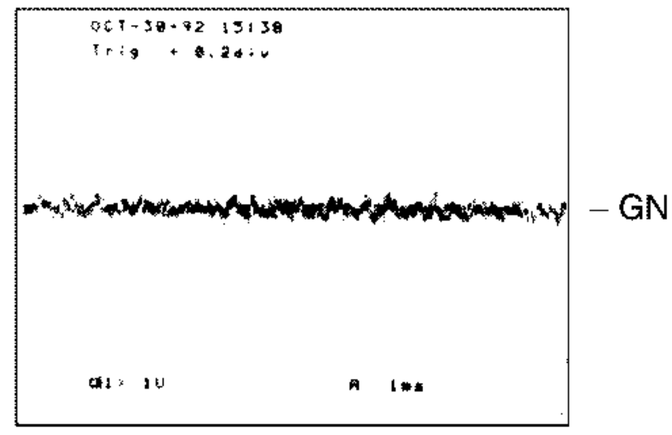
⑦ IC201-Pin 9 : PLAY MODE (SPDR)
1V/div 50msec/div



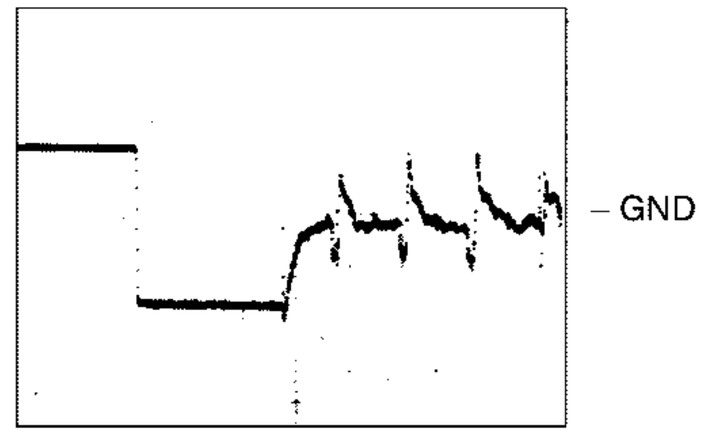
③ TP1-Pin 6 : PLAY MODE (FOER)
100mV/div 10msec/div



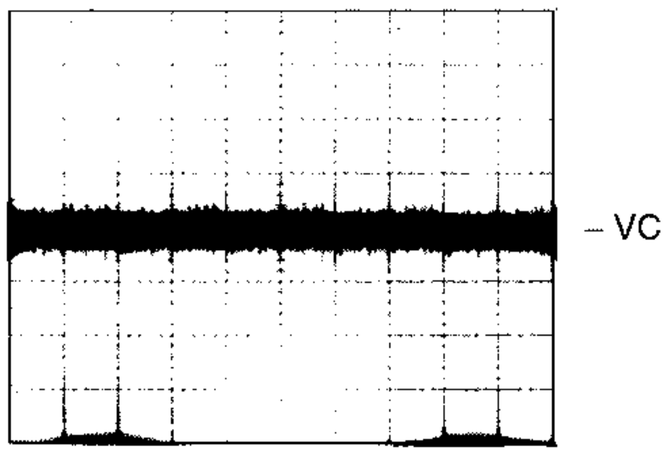
⑤ IC202-Pin 4 : PLAY MODE (FODR)
1V/div 1msec/div



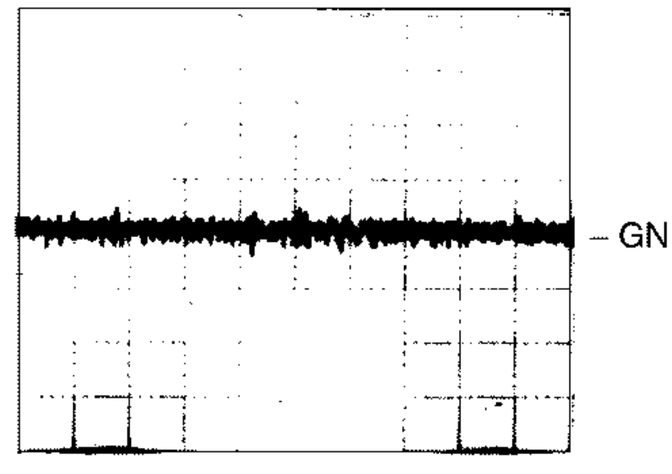
⑦ IC201-Pin 9 : TRACK SEARCH MODE (SPDR)
2V/div 50msec/div



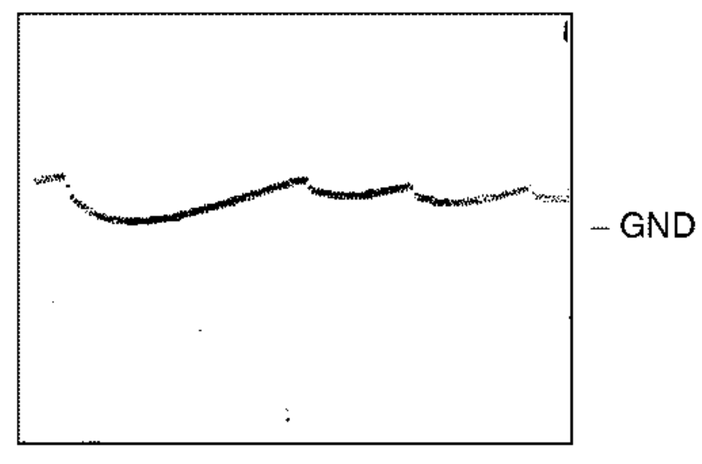
④ TP1-Pin 2 : PLAY MODE (TRER)
200mV/div 1msec/div



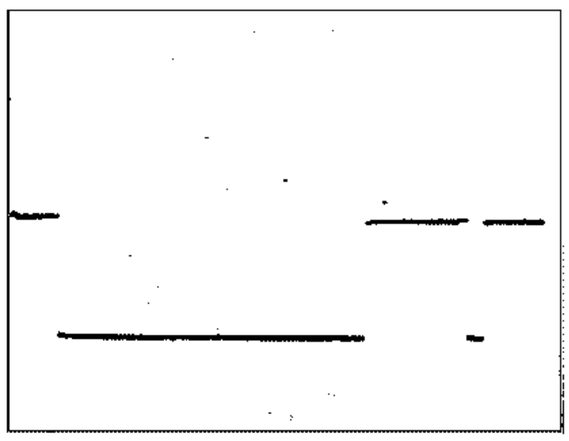
⑥ IC202-Pin 3 : PLAY MODE (TRDR)
500mV/div 1msec/div



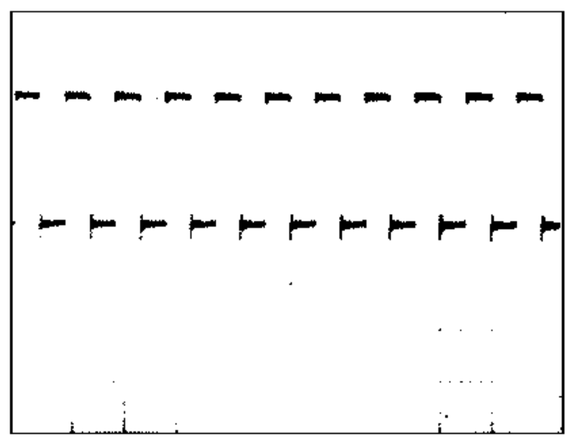
⑧ IC202-Pin 9 : PLAY MODE (CADR)
0.2V/div 2sec/div



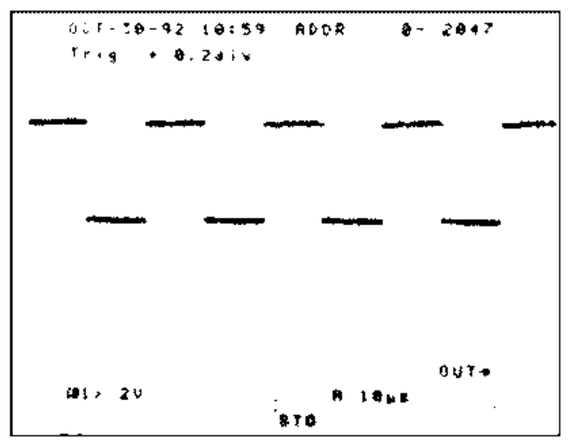
⑧ IC202-Pin 9 : TRACK SEARCH MODE (CADR)
2V/div 200msec/div



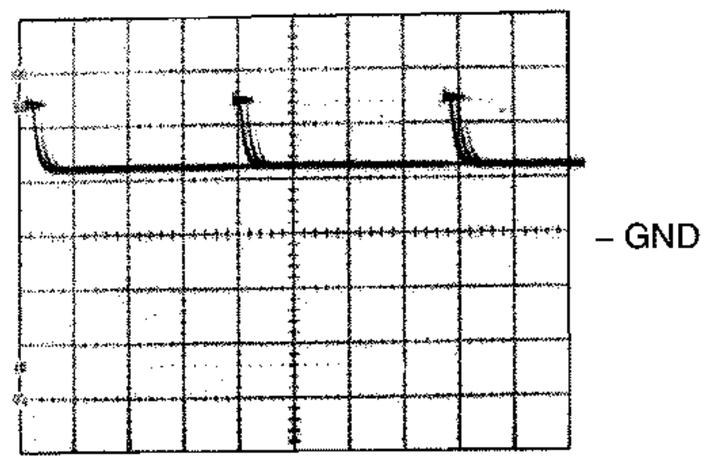
⑯ IC301-Pin 54 : PLAY MODE (1kHz) (BCK)
2V/div 500nsec/div



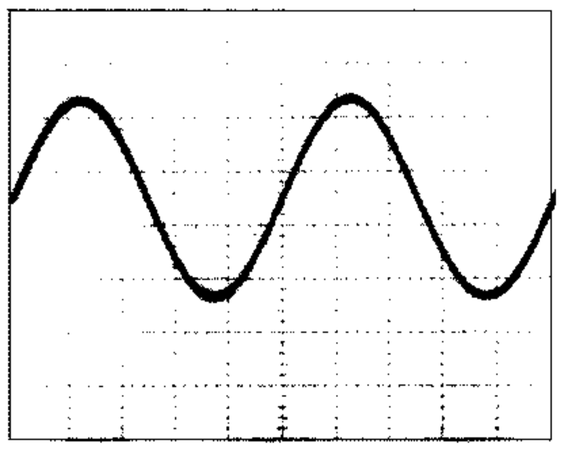
⑱ IC301-Pin 50 : PLAY MODE (1kHz) (LRCK)
2V/div 10µsec/div



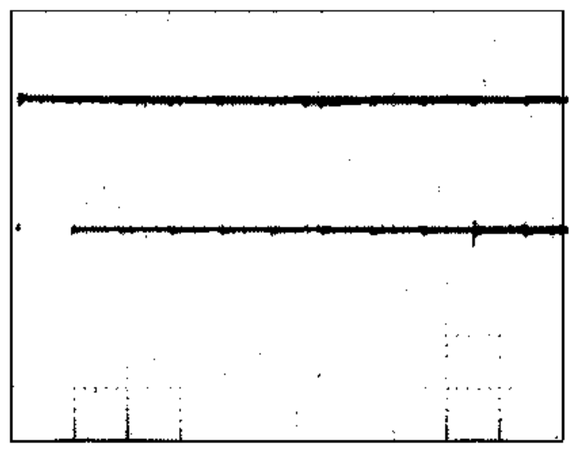
㉝ IC301-Pin 27 : PLAY MODE (MDP)
2V/div 2µsec/div



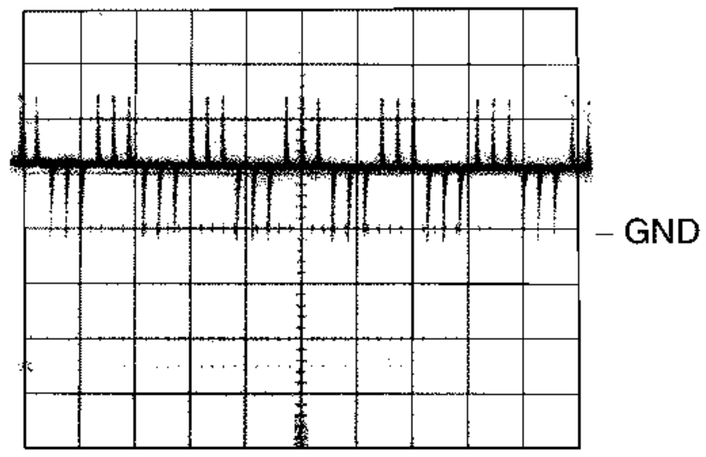
⑩ IC301-Pin 86 : PLAY MODE (1kHz) (LOUT 1)
1V/div 200µsec/div



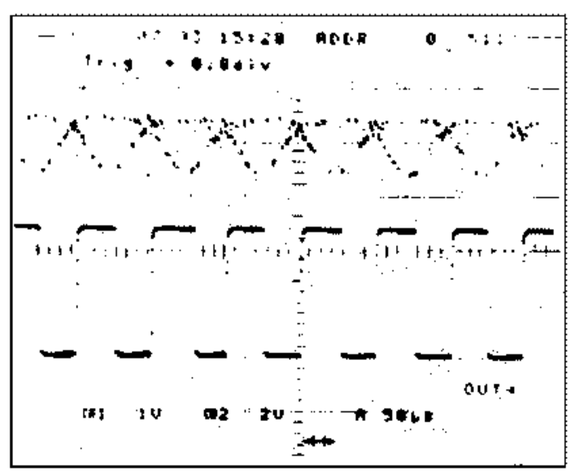
⑲ IC301-Pin 52 : PLAY MODE (1kHz) (PCMD)
2V/div 500nsec/div



㊸ IC301-Pin 38 : PLAY MODE (PCO)
2V/div 10µsec/div



㉓ : TRACK SEARCH MODE
Upper : TP1-Pin 1 (RF) 1V/div
Lower : IC151-Pin 23 (C.OUT)
2V/div 50µsec/div



4. PCB CONNECTION DIAGRAM

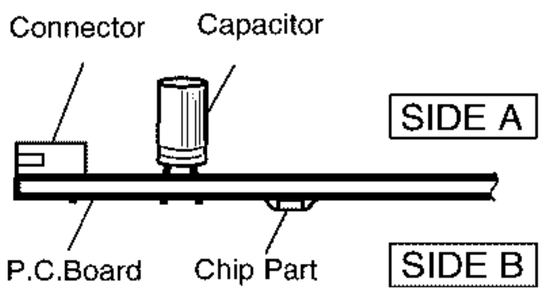
NOTE FOR PCB DIAGRAMS

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

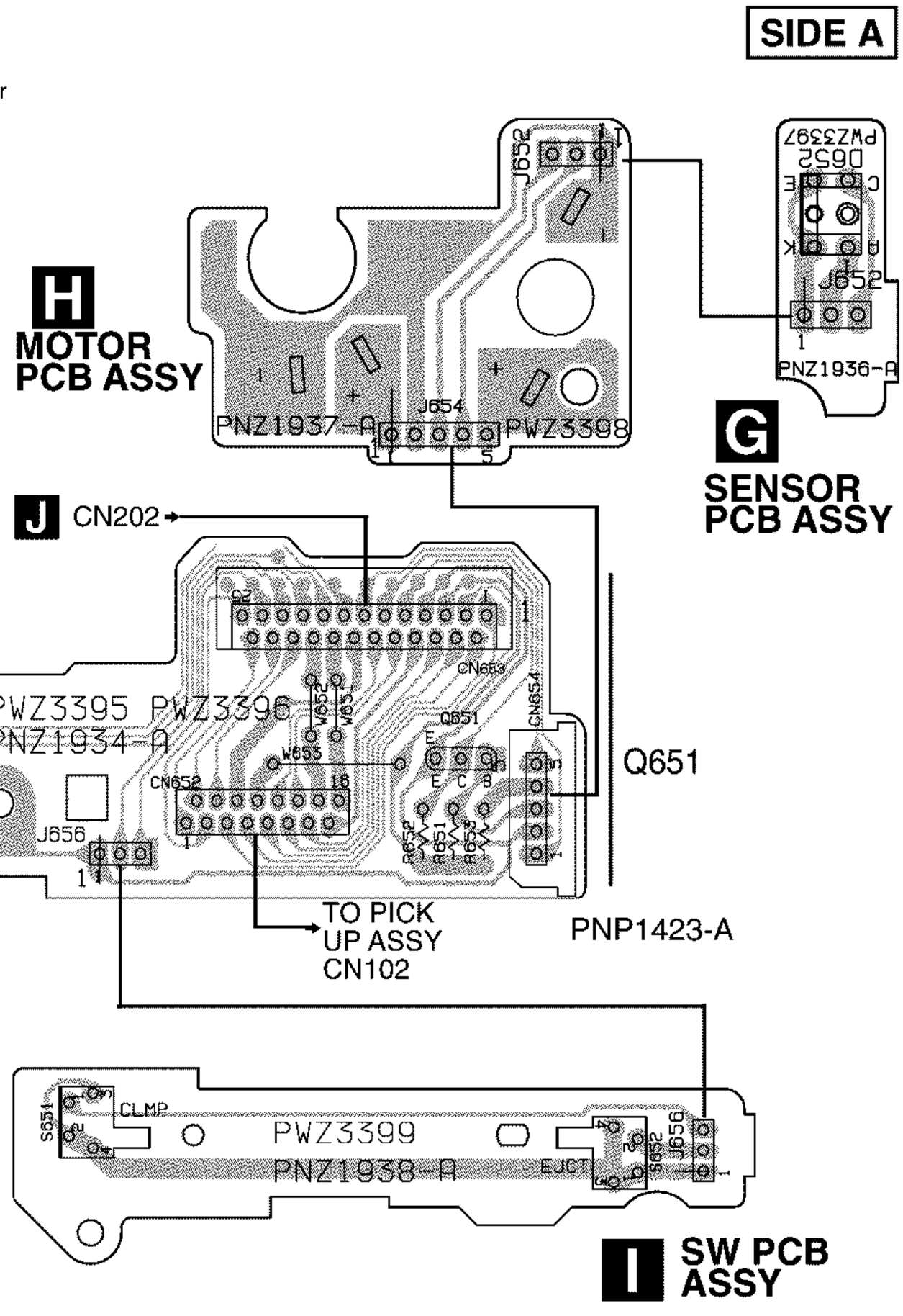
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respecitve destinations, be sure to check with the schematic diagram.

4. Viewpoint of PCB diagrams

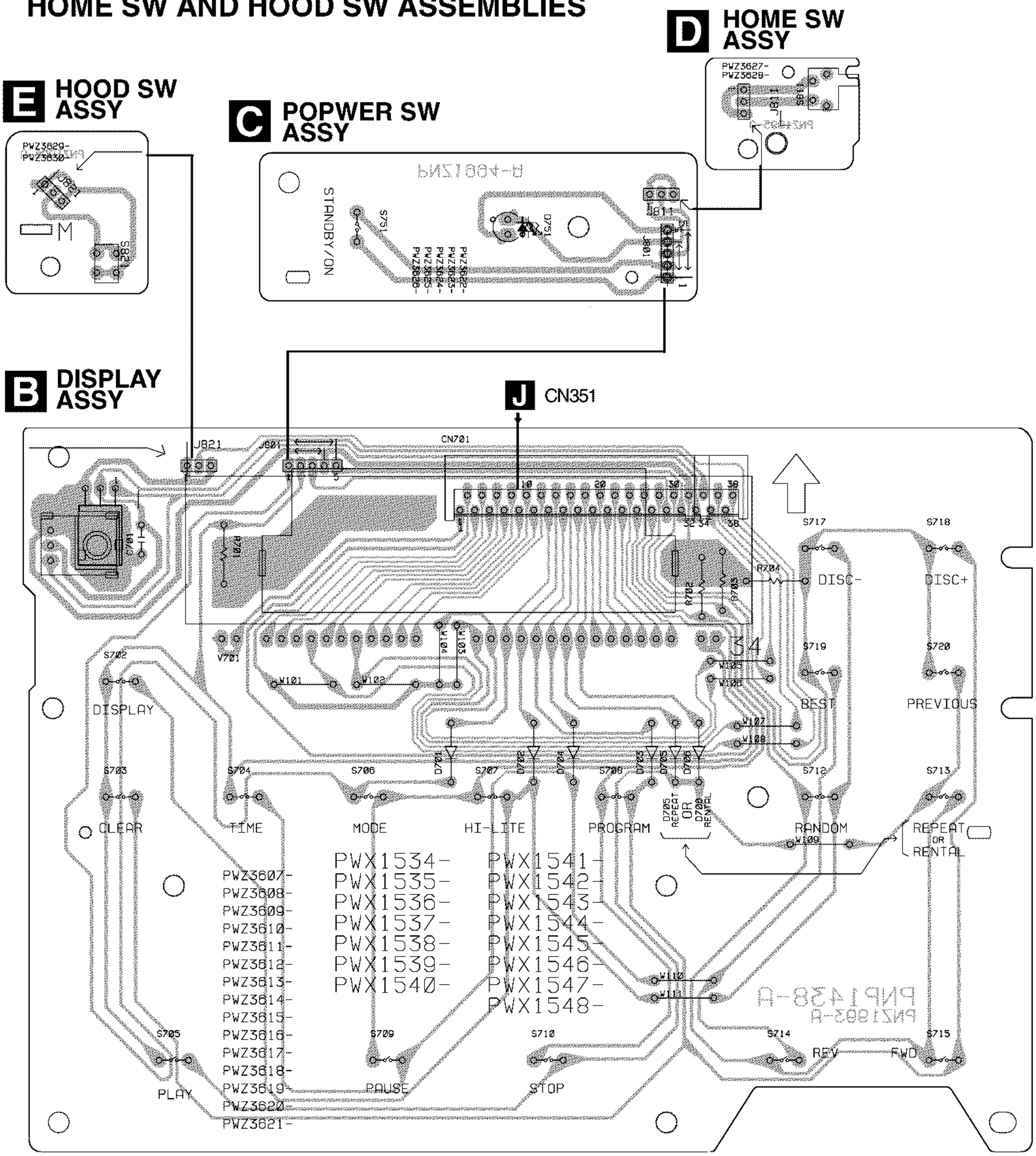


4.1 MECHANISM BOARD, MECHA PCB,SENSOR PCB, MOTOR PCB AND SW PCB ASSEMBLIES



4.2 DISPLAY,POWER SW, HOME SW AND HOOD SW ASSEMBLIES

SIDE A

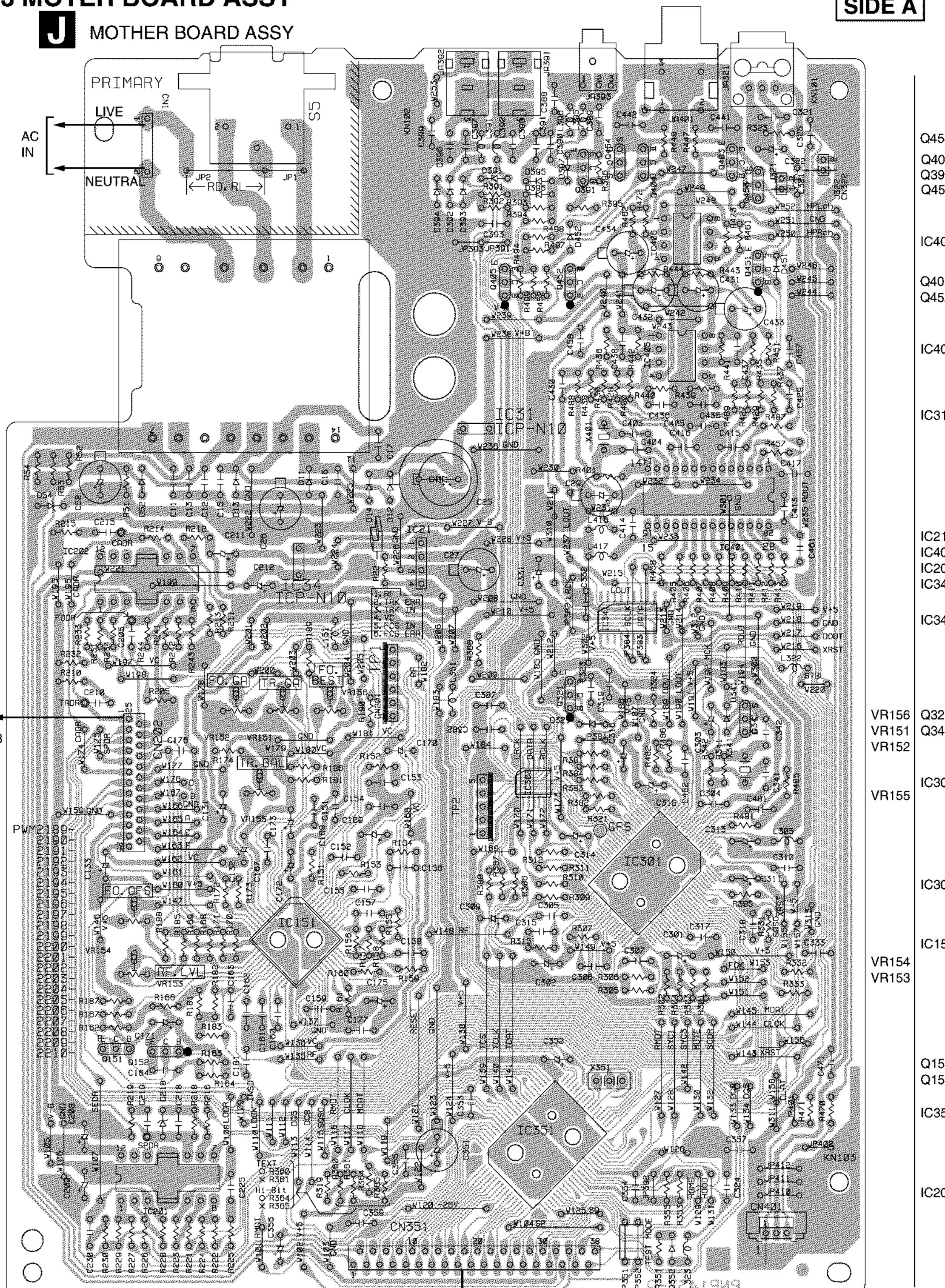


PNP1438-A

PD-F607, PD-F507, PD-F407
4.3 MOTER BOARD ASSY

SIDE A

J MOTHER BOARD ASSY



5. PCB PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	→	*56 × 10¹*	→	*561*	*RD1/4PU561J*
47kΩ	→	*47 × 10³*	→	*473*	*RD1/4PU473J*
0.5Ω	→	*R50*			*RN2HR50K*
1Ω	→	*1R0*			*RS1P1R0K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	→	*562 × 10¹*	→	*5621*	*RN1/4PC5621F*

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No. PD-F607 KUXJ,KCXJ	Part No. PD-F507 KUXJ,KCXJ	Part No. PD-F407 KUXJ,KCXJ	Remarks
⚠	MOTHER BOARD ASSY	PWM2199	PWM2193	PWM2189	
NSP	SUB BOARD ASSY	PWX1540	PWX1537	PWX1534	
	├ DISPLAY ASSY	PWZ3612	PWZ3610	PWZ3607	
NSP	├ POWER SW ASSY	PWZ3622	PWZ3622	PWZ3622	
NSP	├ HOME SW ASSY	PWZ3627	PWZ3627	PWZ3627	
NSP	└ HOOD SW ASSY	PWZ3629	PWZ3629	PWZ3629	
NSP	GM MECHANISM	PXA1590	PXA1590	PXA1590	
NSP	├ LO MECHANISM BOARD ASSY	PWX1496	PWX1496	PWX1496	
NSP	├ MECHA PCB ASSY	PWZ3395	PWZ3395	PWZ3395	
NSP	├ SENSOR PCB ASSY	PWZ3397	PWZ3397	PWZ3397	
NSP	├ MOTOR PCB ASSY	PWZ3398	PWZ3398	PWZ3398	
NSP	└ SW PCB ASSY	PWZ3399	PWZ3399	PWZ3399	
NSP	└ SERVO MECHANISM ASSY GM	PXA1591	PXA1591	PXA1591	
NSP	└ MECHANISM BOARD ASSY	PWX1192	PWX1192	PWX1192	

■ CONTRAST OF PCB ASSEMBLIES

MOTHER BOARD ASSY

PWM2199, PWM2193 and PWM2189 are constructed the same except for the following:

Mark	Symbol and Description	Part No. PWM2199	Part No. PWM2193	Part No. PWM2189	Remarks
	IC302	LC89170M	Not used	Not used	
	Q321	DTC124ES	DTC124ES	Not used	
	D321,D391	1SS254	1SS254	Not used	
	C321	CGCYX104K25	CGCYX104K25	Not used	
	C322	CEAT101M10	CEAT101M10	Not used	
	C325	CKCYF103Z50	CKCYF103Z50	Not used	
	C382	CQMA104J50	Not used	Not used	
	C387	CKCYF103Z50	Not used	Not used	
	R321	RD1/4PU102J	RD1/4PU102J	Not used	
	R324	RD1/4PU152J	RD1/4PU152J	Not used	

Mark	Symbol and Description	Part No.			Remarks
		PWM2199	PWM2193	PWM2189	
	R360	RD1/4PU103J	Not used	Not used	
	R361	Not used	RD1/4PU103J	RD1/4PU103J	
	R381-R384,386-R388	RD1/4PU471J	Not used	Not used	
	R385	RD1/4PU102J	Not used	Not used	
	CN351	HLEM38S-1	HLEM34S-1	HLEM32S-1	
	JA321	TOTX178	TOTX178	Not used	

DISPLAY ASSY

PWZ3612, PWZ3610 and PWZ3607 are constructed the same except for the following:

Mark	Symbol and Description	Part No.			Remarks
		PWZ3612	PWZ3610	PWZ3607	
	C701	CKCYF103Z50	CKCYF103Z50	Not used	
	CN701	HLEM38R-1	HLEM34R-1	HLEM32R-1	
	S702	RSG1030	Not used	Not used	
		GP1U27X	GP1U27X	Not used	

■ PCB PARTS LIST FOR PD-607/KUXJ

Mark No. Description Parts No.

J MOTHER BOARD ASSY

SEMICONDUCTORS

	IC151	CXA1782CQ
	IC301	CXD2529Q
⚠	IC31,IC34	ICP-N10
⚠	IC201,IC202	LA6520
	IC302	LC89170M
	IC405	NJM4558D-D
	IC351	PD4900B
⚠	IC21	PQ05RR12
	Q151	2SA854S
	Q403,Q404	2SD2144S
	Q341	2SK246
	Q152	DTA124ES
	Q321,Q405	DTC124ES
	D321,D341,D391-D394	1SS254
	D54	MTZJ18B
	D218	MTZJ6.2B
⚠	D11-D14,D52	S5688G

COILS

	L351	LAU100J
	L322,L391	LAU1R0J

Mark No. Description Parts No.

CAPACITORS

	C181	CCCCH100D50
	C341,C342	CCCCH120J50
	C318	CCCSL181J50
	C315	CCCSL221J50
	C481,C482	CCCSL390J50
	C171,C175,C301,C302	CEAT101M10
	C311-C314,C316,C322,C352	CEAT101M10
	C52	CEAT101M35
	C26	CEAT102M16
	C433,C434	CEAT220M25
	C131-C133,C27	CEAT330M16
	C25	CEAT332M16
	C351	CEAT471M6R3
	C169,C170,C356	CEAT4R7M50
	C309	CEATR47M50
	C156,C161,C164,C168,C218	CGCYX103K25
	C321	CGCYX104K25
	C160	CGCYX333K25
	C167	CGCYX472K25
	C152,C307	CGCYX473K25

Mark	No.	Description	Parts No.
	C163		CKCYB102K50
	C176,C306,C441,C442		CKCYB152K50
	C305		CKCYB222K50
	C162		CKCYB332K50
	C151		CKCYB682K50
	C11-C13,C15,C159		CKCYF103Z50
	C16,C17,C172,C173,C205		CKCYF103Z50
	C210,C215,C219,C2231,C29		CKCYF103Z50
	C304,C310,C317,C323,C325		CKCYF103Z50
	C353,C354,C357,C387,C399		CKCYF103Z50
	C153-C155,C158,C382		CQMA104J50
	C157		CQMA823J50

RESISTORS

VR153,VR155(10kΩ/0.1W)		RCP1045
VR151,VR152,VR154(22kΩ/0.1W)		RCP1046
VR156(220kΩ/0.1W)		RCP1049
Other Resistors		RD1/4PU□□□J

OTHERS

CN351	CONNECTOR	HLEM38S-1
JA401	JACK	PKB1023
X341	JACK	PSS1008
⚠1	TERMANAL	RKC-061
JA391,JA392	JACK	RKN1004
CN201	CONNECTOR 6P	RKP-533
JA321	OPTICAL OUTPUT JACK	TOTX178
CN202	CONNECTOR	VKN1201
X351	CERAMIC RESONATOR(4.194MHz)	VSS1014

SUB BOARD ASSY

OTHERS

PC BOARD	PNP1438

B DISPLAY ASSY

SEMICONDUCTORS

D701-D705	1SS254

SWITCHES

S702-S710,S712-S715	RSG1030
S717-S720	RSG1030

CAPACITOR

C701	CKCYF103Z50

OTHERS

	REMOTE SENSOR	GP1U27X
CN701	CONNECTOR	HLEM38R-1
V701	FL INDICATOR TUBE	PEL1089

C POWER SW ASSY

SWITCH

S751	RSG1030

D HOME SW ASSY

SWITCH

S811	DSG1048

Mark	No.	Description	Parts No.

E HOOD SW ASSY

SWITCH

S821	DSG1015

OTHERS

J821		D20PWW0310E

A MECHANISM BOARD ASSY

SWITCH

S610	DSG1016

OTHERS

CN610	MT CONNECTOR	173979-4

LO MECHANISM BOARD ASSY

OTHERS

PC BOARD	PNP1423

F MECHA PCB ASSY

SEMICONDUCTOR

Q651	DTC124ES

RESISTORS

R651,R652	56kΩ	ACN7012
R653	220Ω	DCN1062

OTHERS

CN652	CONNECTOR	16FMZ-ST
CN651	MT CONNECTOR	173979-4
CN653	CONNECTOR	VKN1229

G SENSOR PCB ASSY

SEMICONDUCTOR

D652	GP1S24

OTHERS

J652	D20PWW0315E

H MOTOR PCB ASSY

OTHERS

LOADING MOTOR	VXM1034

I SW PCB ASSY

SWITCHES

S651,S652	VSG1006

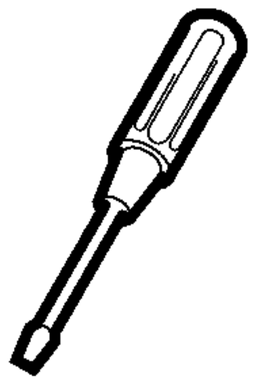
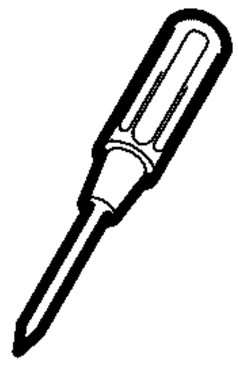
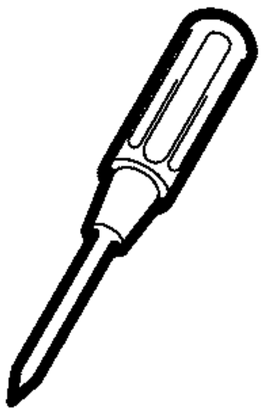
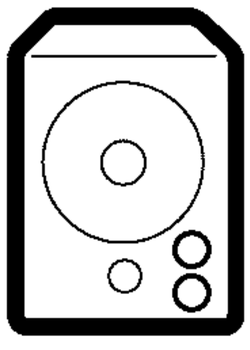
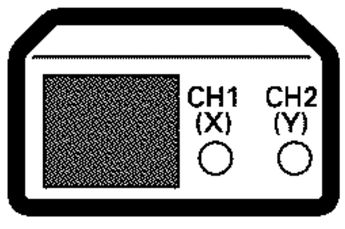
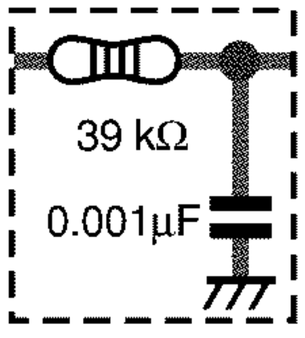
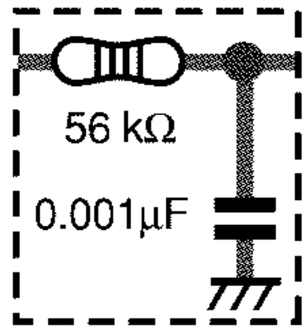
OTHERS

J656	D20PWW0315E

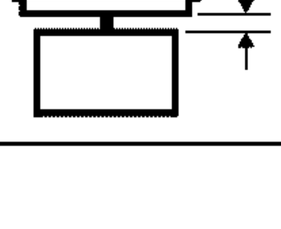
6. ADJUSTMENT

6.1 PREPARATIONS

6.1.1 Jigs and Measuring Instruments

CD TEST DISC (YEDS-7)	⊖ Precise screwdriver	 ⊖ screwdriver (small)	 ⊕ screwdriver (medium)	Ball point hexagon wrench (size: 1.5mm) GGK1002
 ⊕ screwdriver (large)	 Low-frequency oscillator	 Dual-trace oscilloscope (10 : 1 probe)	 Low pass filter① (39 kΩ + 0.001μF)	 Low pass filter② (56 kΩ + 0.001μF)

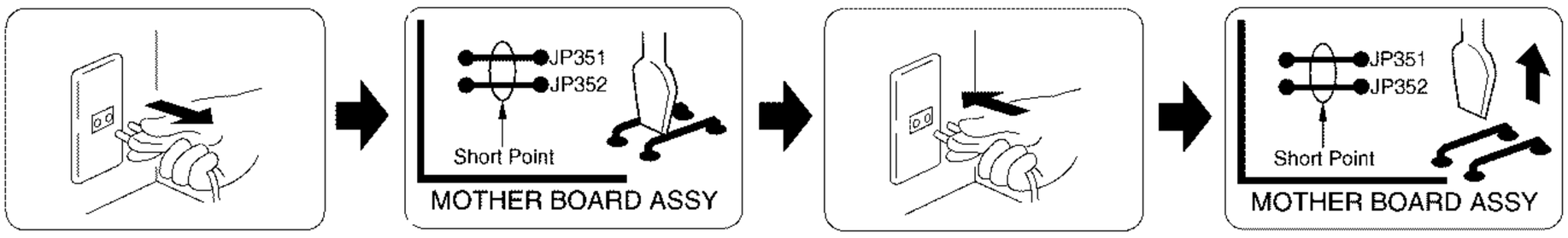
6.1.2 Necessary Adjustment Points

When	Adjustment points
Exchange PICKUP	1.2.3.4.5.6.7. 8.9.10.11.12. → Page 26~31
Exchange MOTHER BOARD ASSY	1.3.5.6.7.8. 9.10.11.12. → Page 26~31
Exchange SERVO MECH ASSY	1.2.3.4.5.6.7. 8.9.10.11.12. → Page 26~31
Exchange SPINDLE MOTOR	 ADJ → Page 10

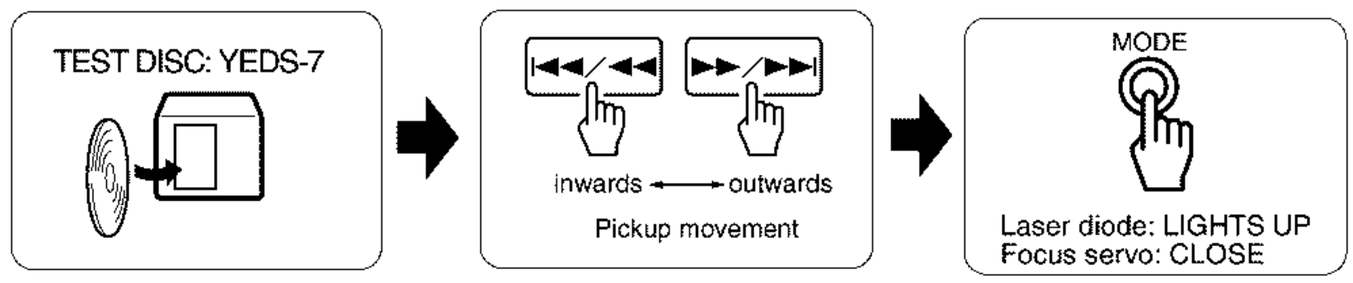
6.2 ADJUSTMENT

1 How to Start/Cancel Test Mode

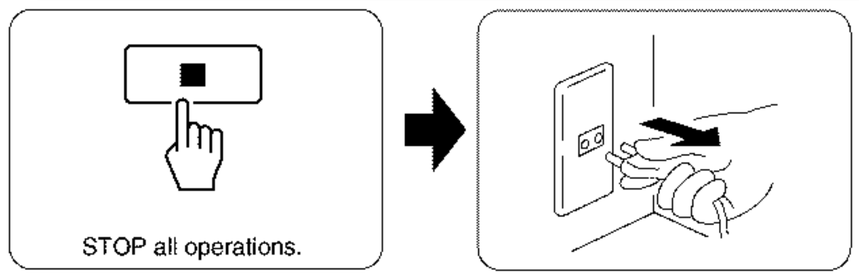
TEST MODE: ON



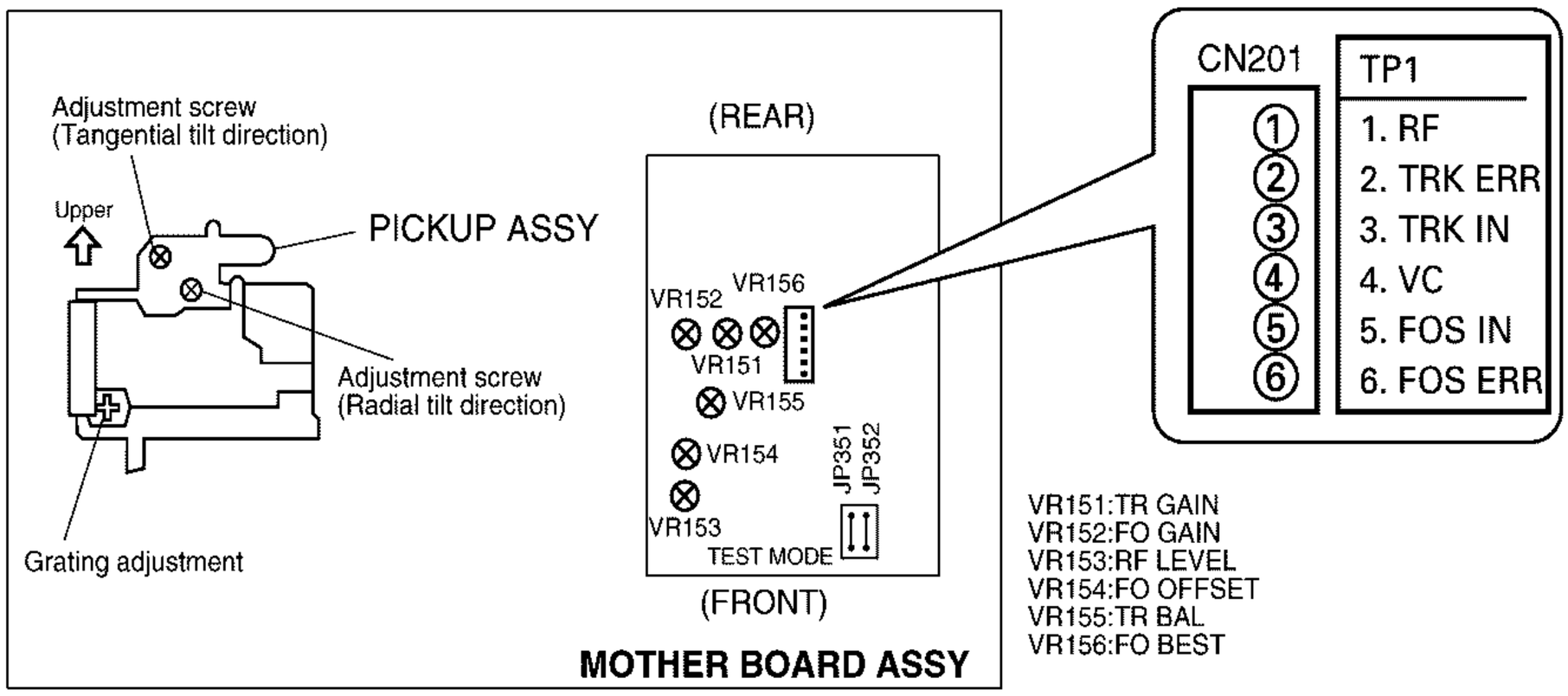
TEST MODE: PLAY



TEST MODE: STOP → CANCEL



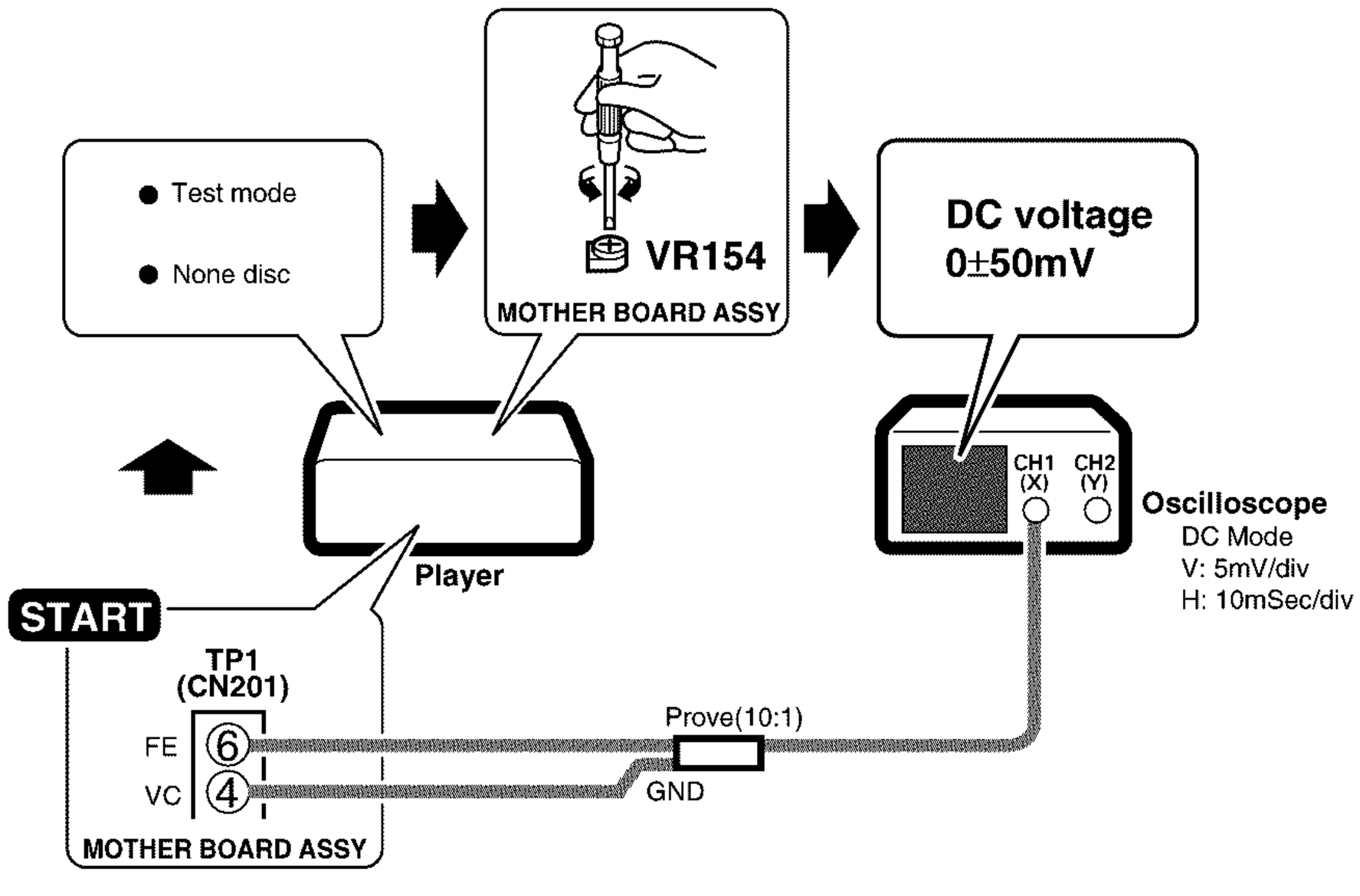
2 Adjustment Locations



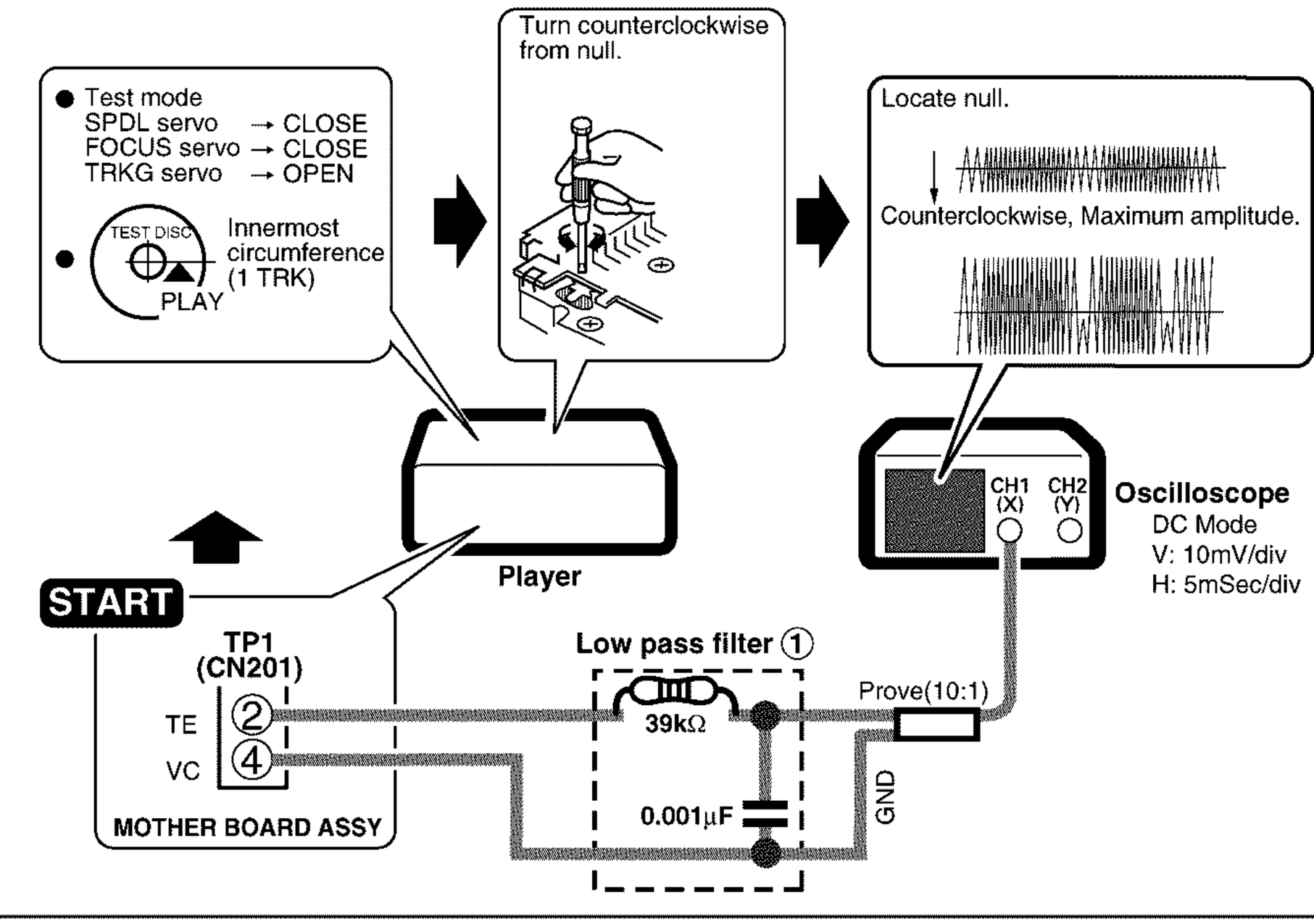
VR151:TR GAIN
VR152:FO GAIN
VR153:RF LEVEL
VR154:FO OFFSET
VR155:TR BAL
VR156:FO BEST

6.3 CHECK AND ADJUSTMENT

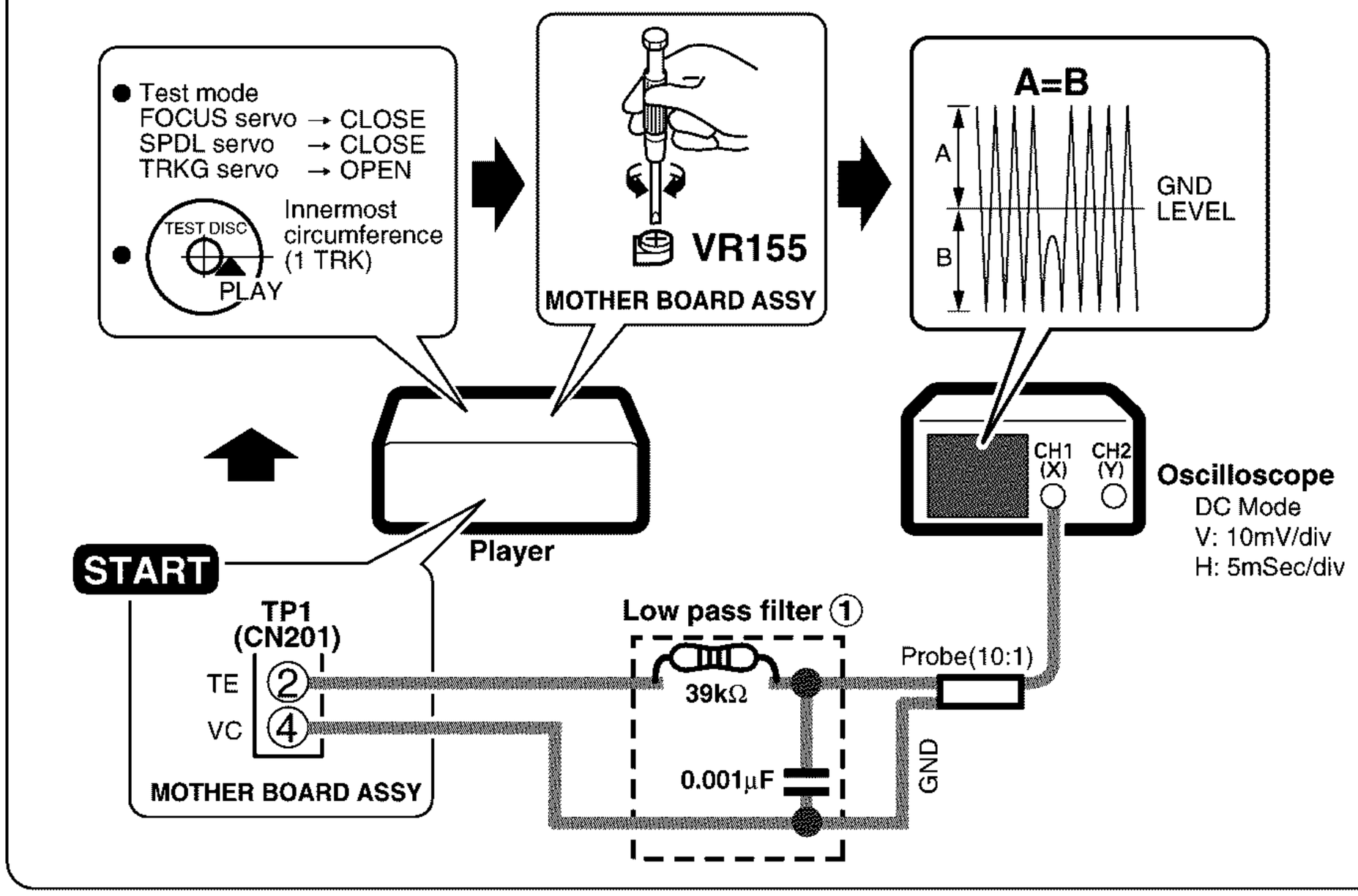
1. Focus Offset Adjustment



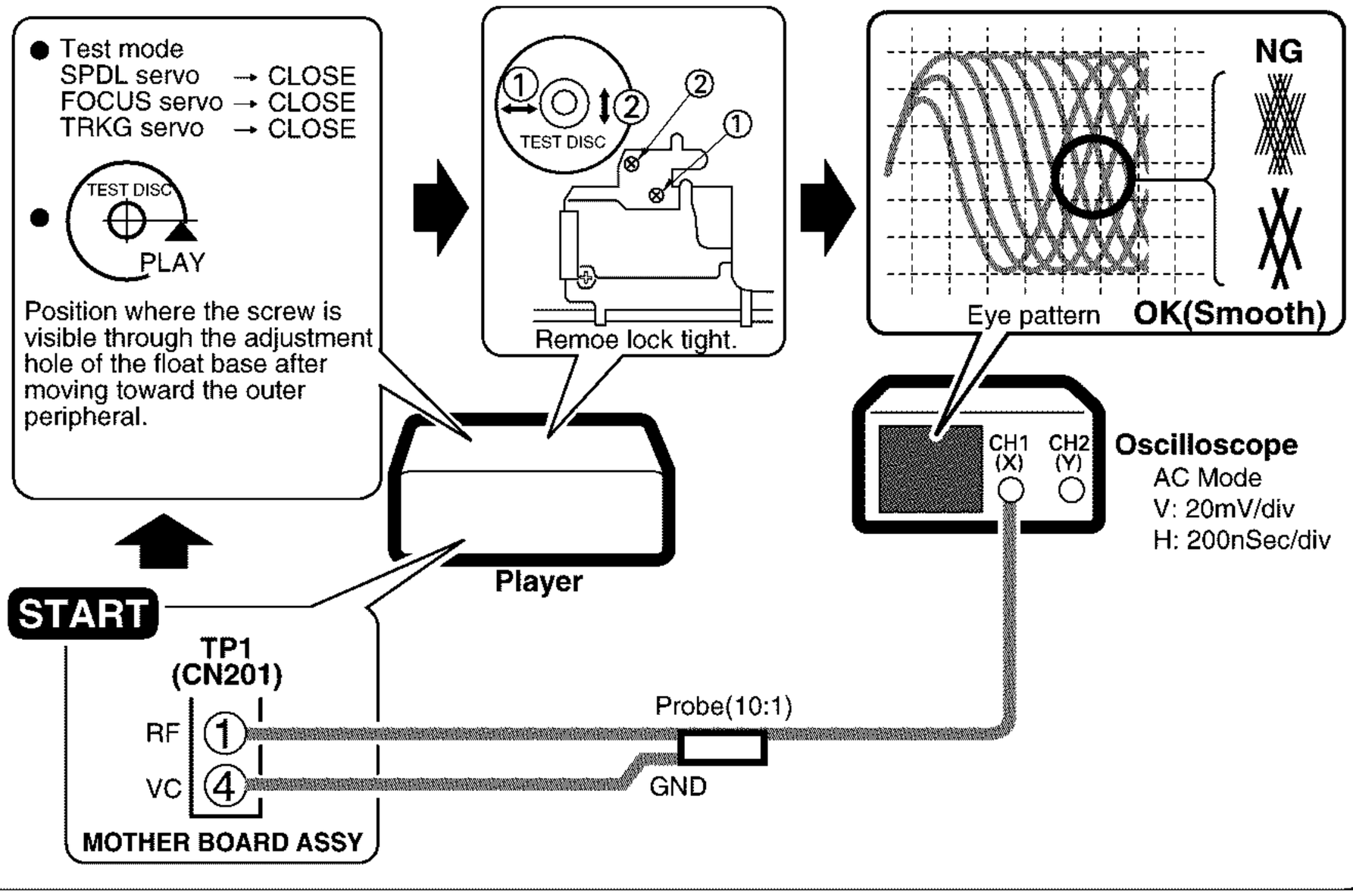
2. Grating Adjustment



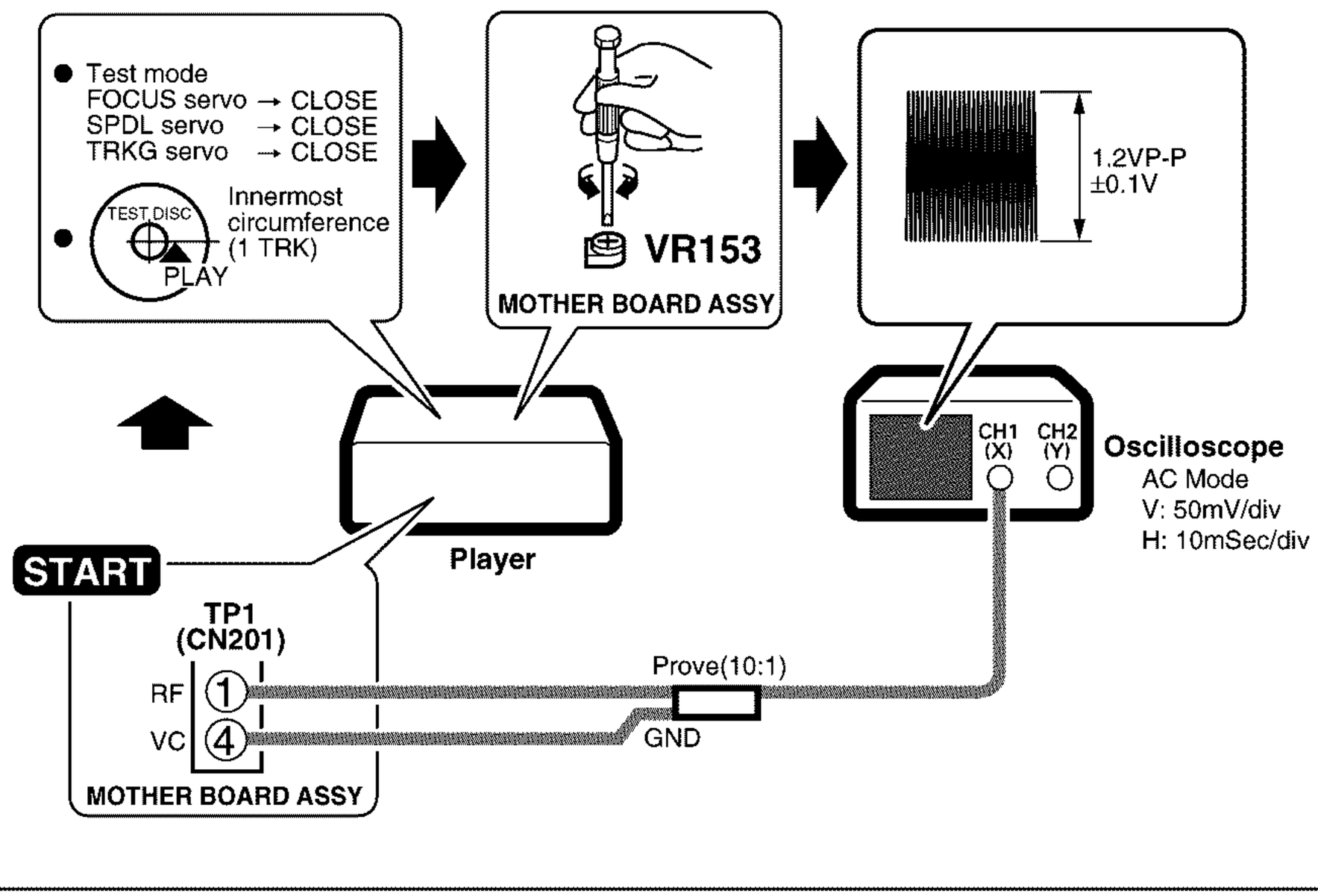
3. Tracking Error Barance Adjustment



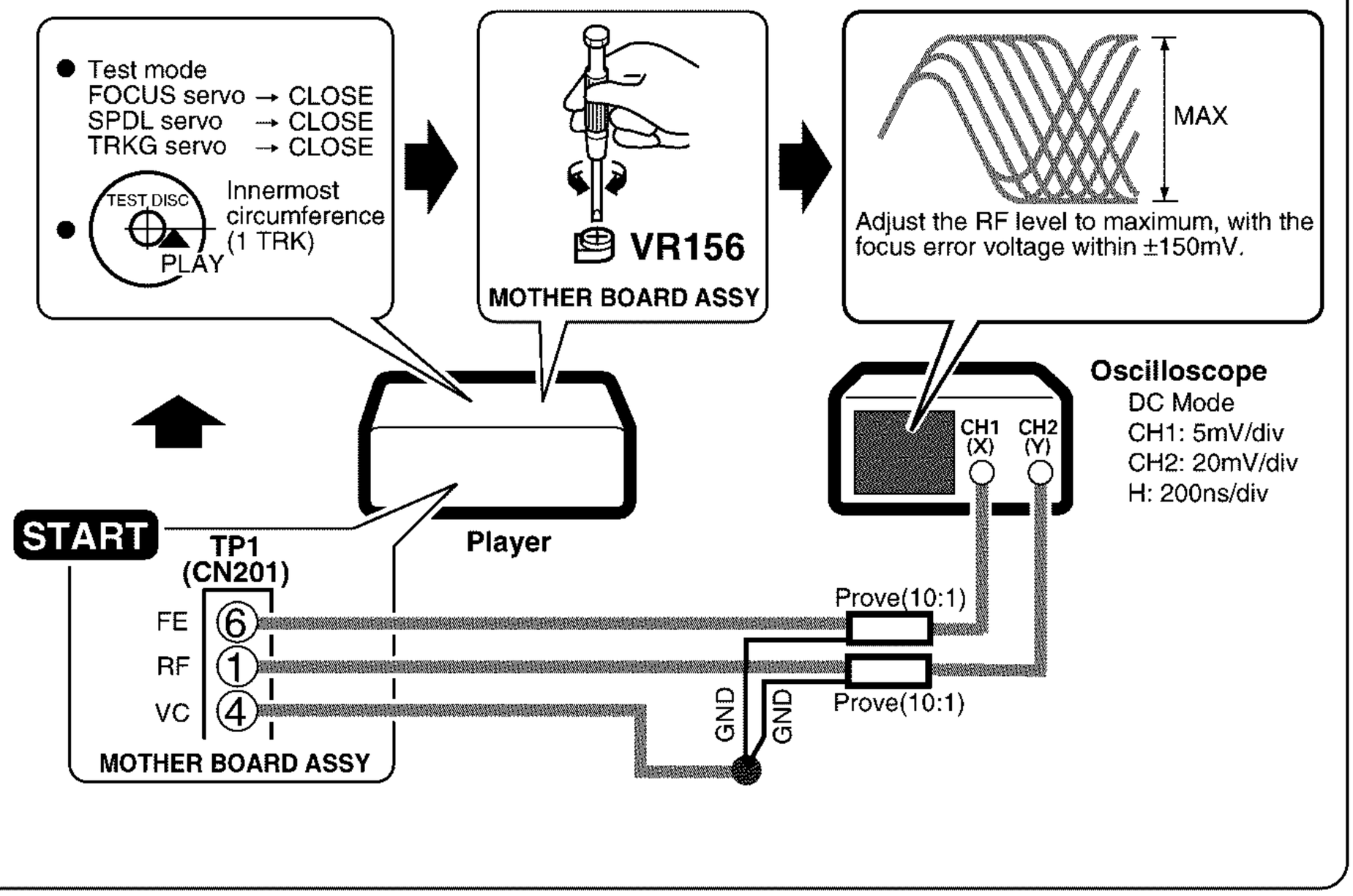
4. PICKUP ①RADIAL / ②TANGENTIAL DIRECTION TILT ADJUSTMENT



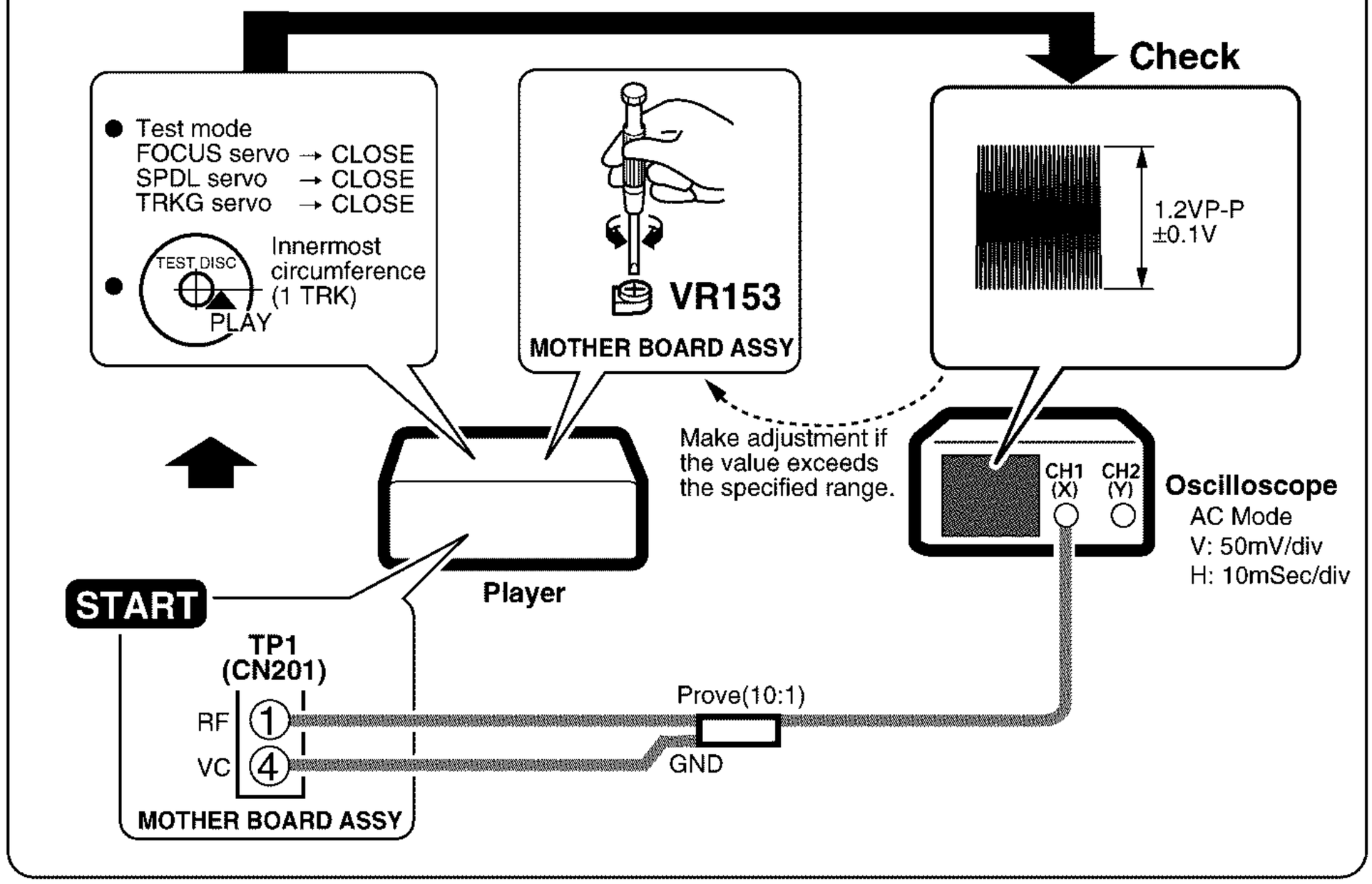
5. RF LEVEL ADJUSTMENT I



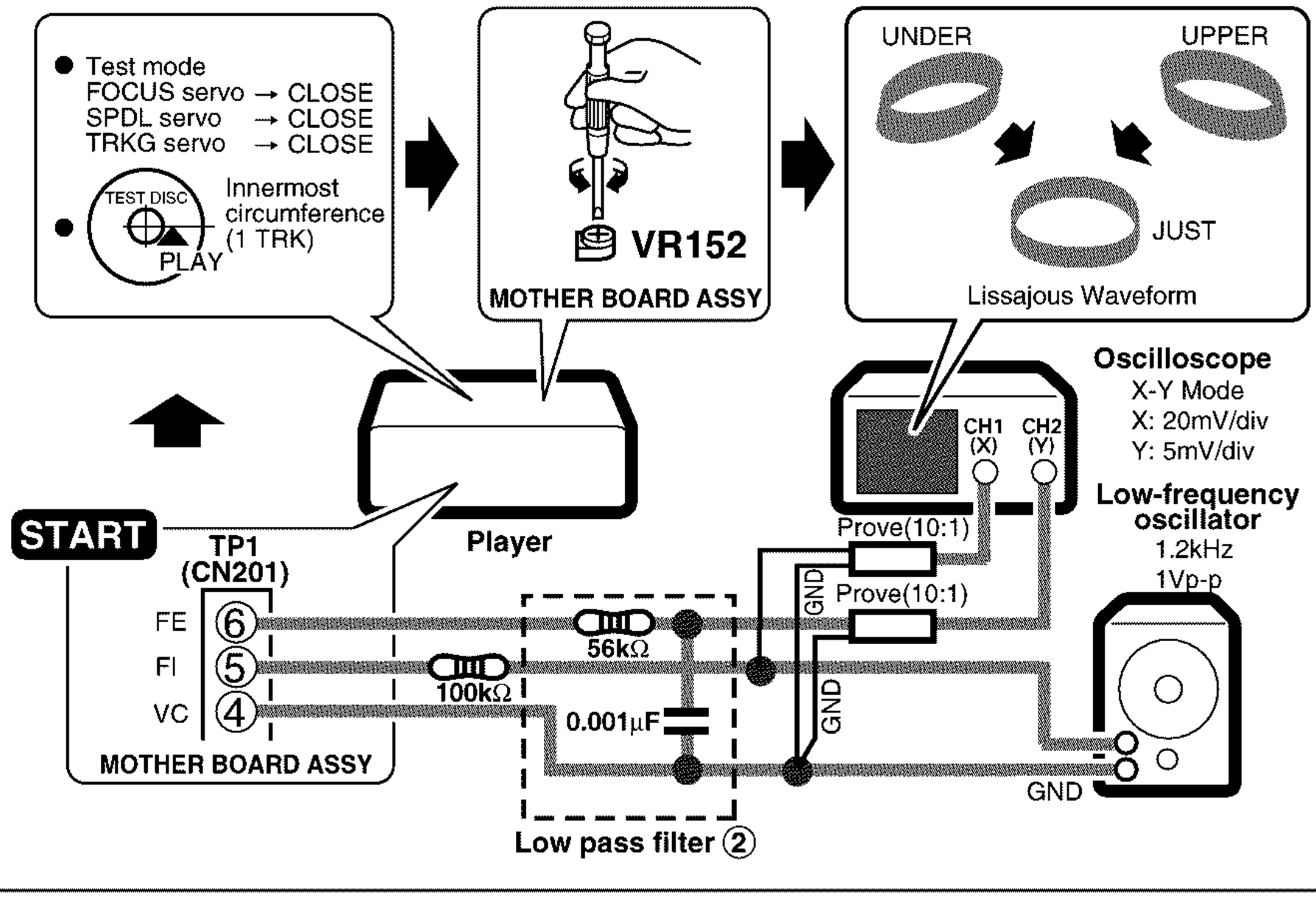
6. Focus Best Adjustment I



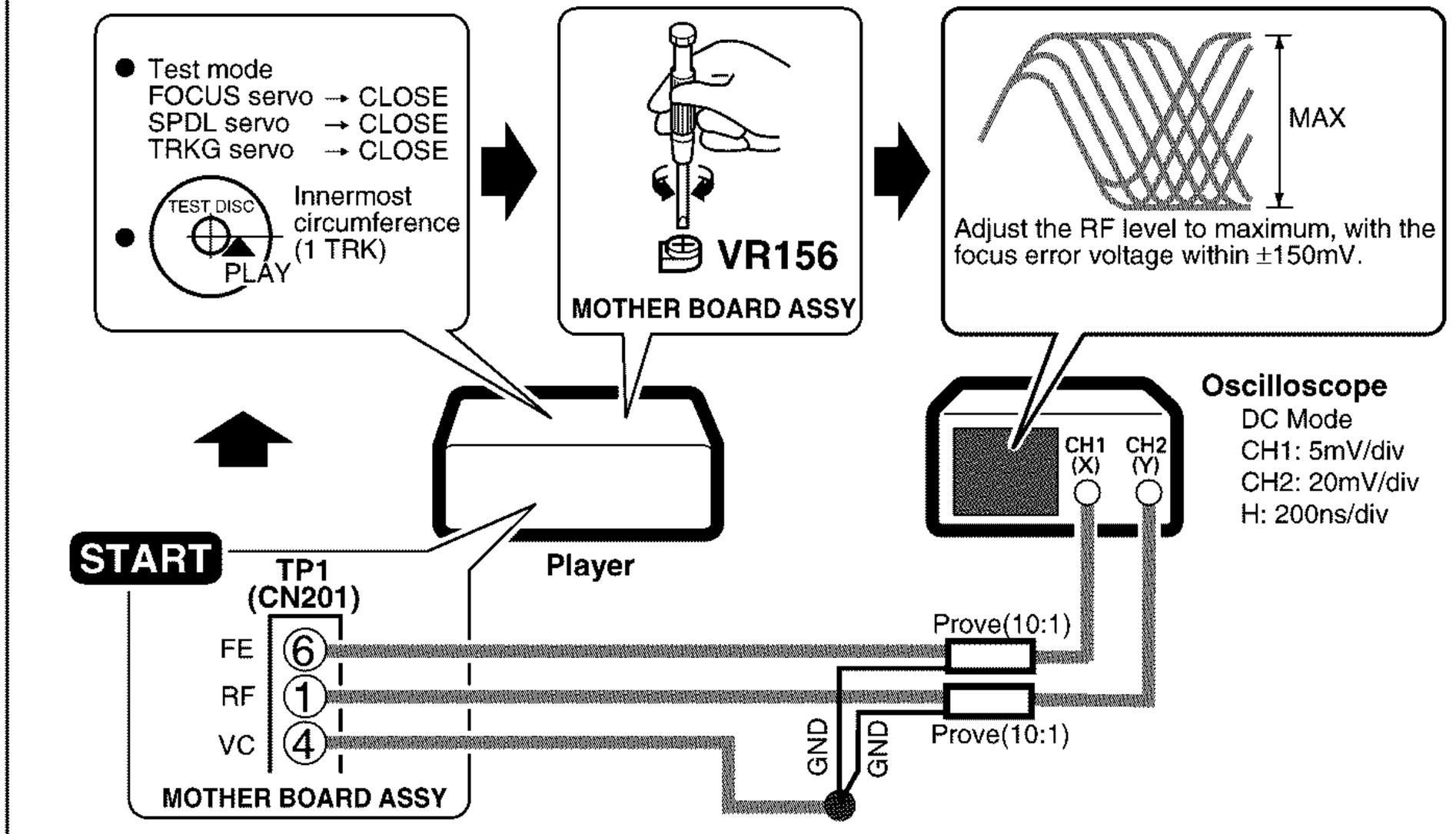
7. RF LEVEL ADJUSTMENT Ⅱ



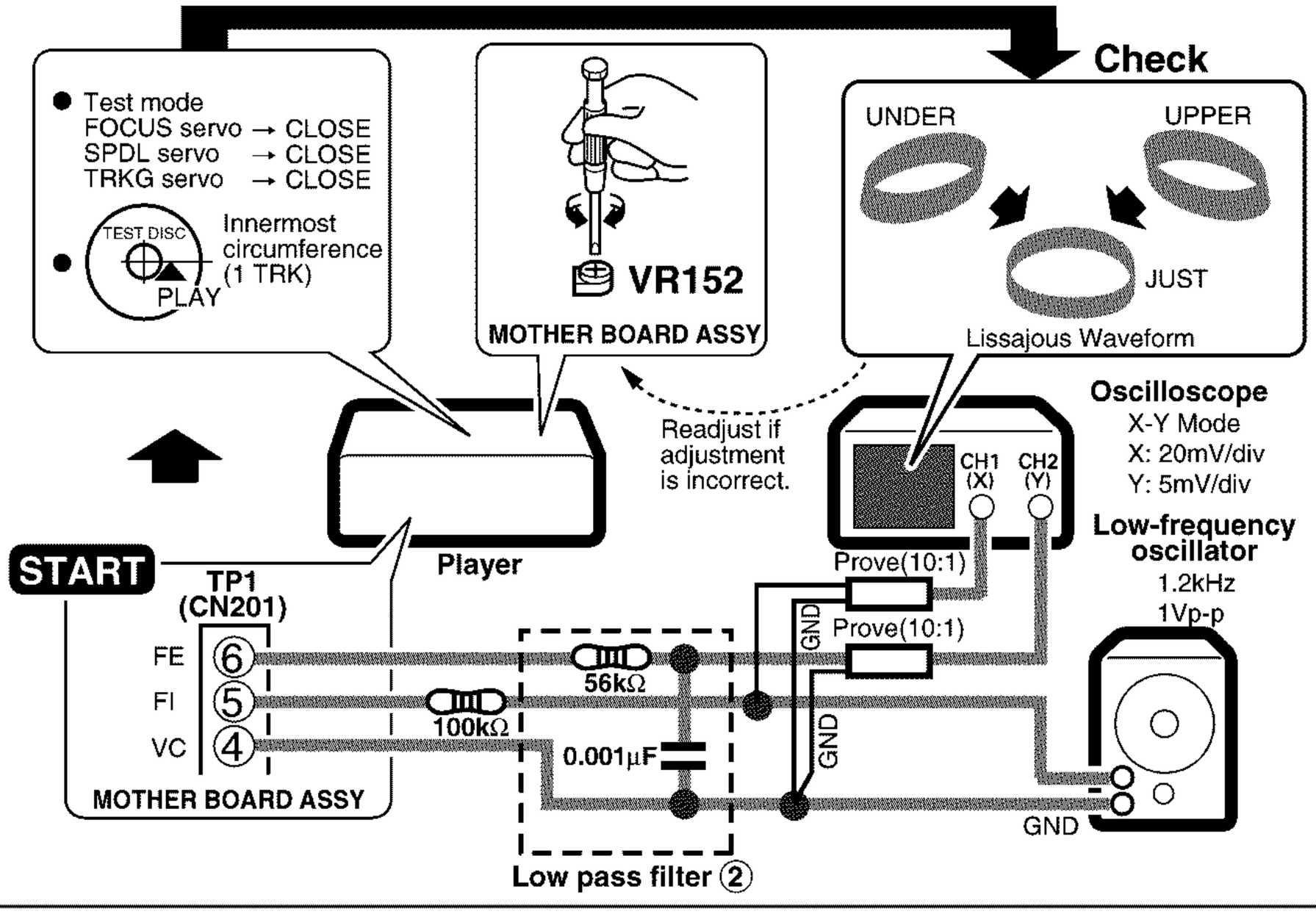
8. Focus Servo Loop Gain Adjustment Ⅰ



9. Focus Best Adjustment Ⅱ

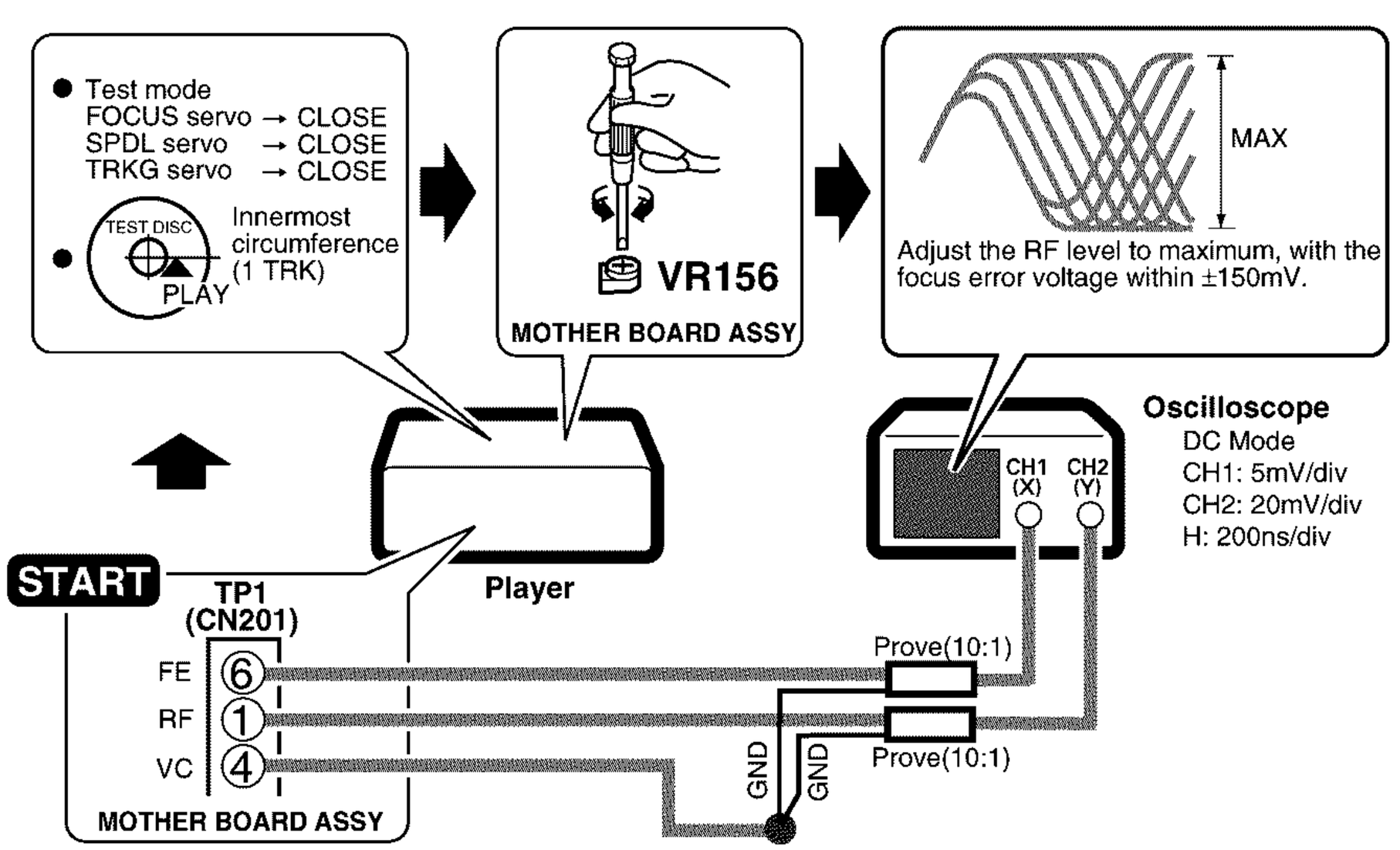


10. Focus Servo Loop Gain Adjustment Ⅱ

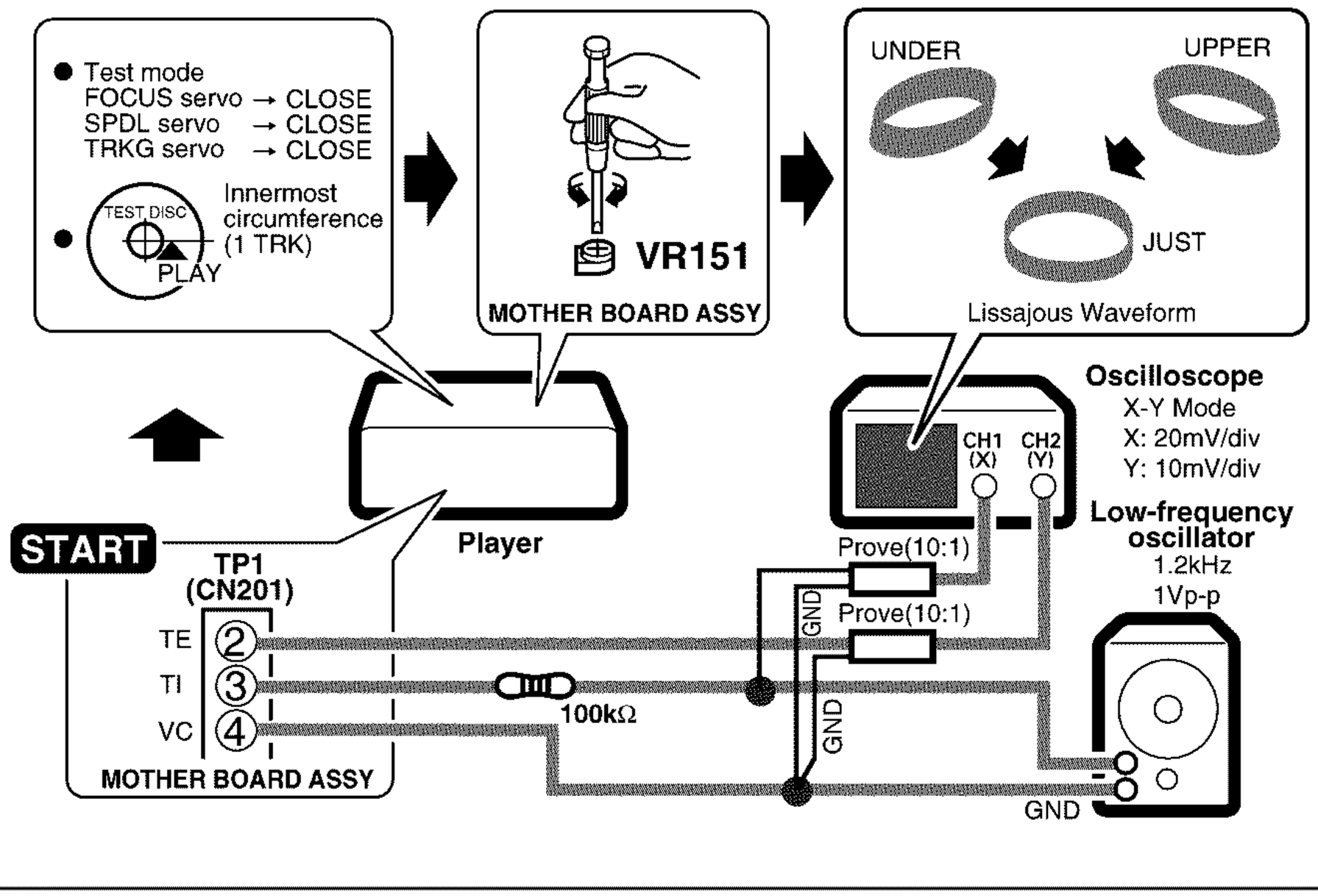


11. Focus Best Adjustment Ⅲ

Adjust this point only if adjustment was made in item 10.



12. Tracking Servo Loop Gain Adjustment



7. GENERAL INFORMATION

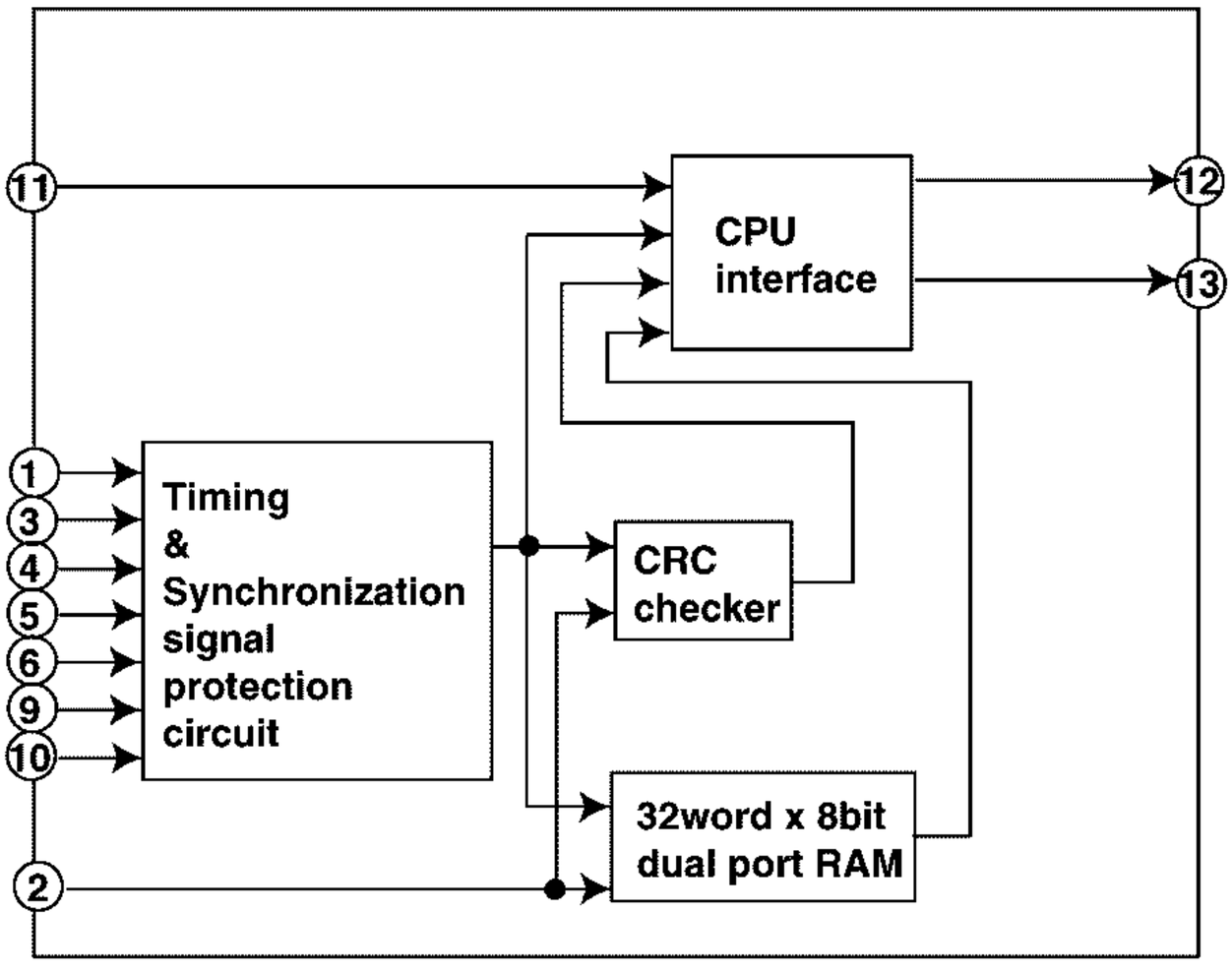
7.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

■ LC89170M(IC302 : MOTHER BOARD ASSY)

● CD-TEXT DECODER IC

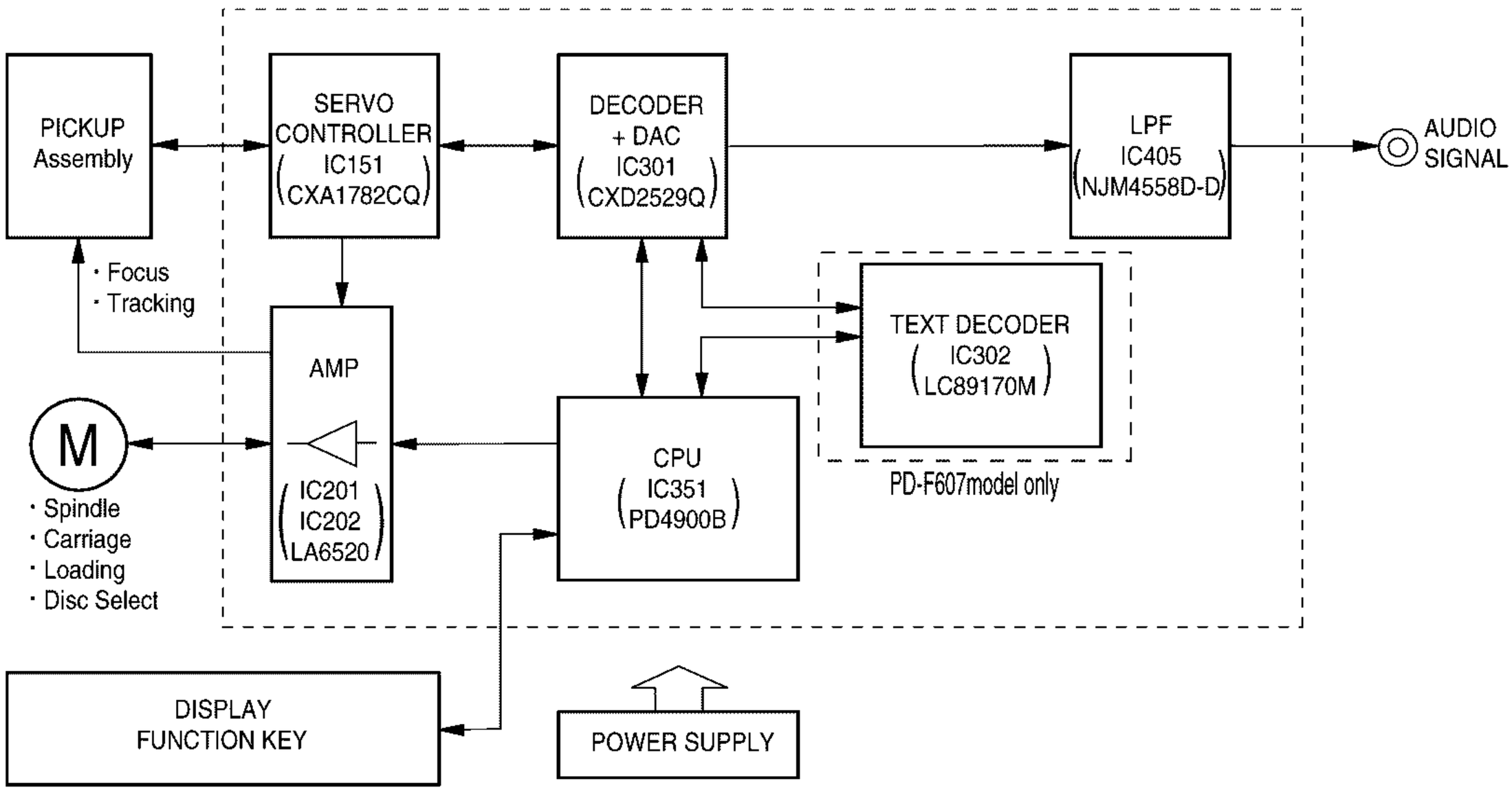
● Block Diagram



● Pin Function

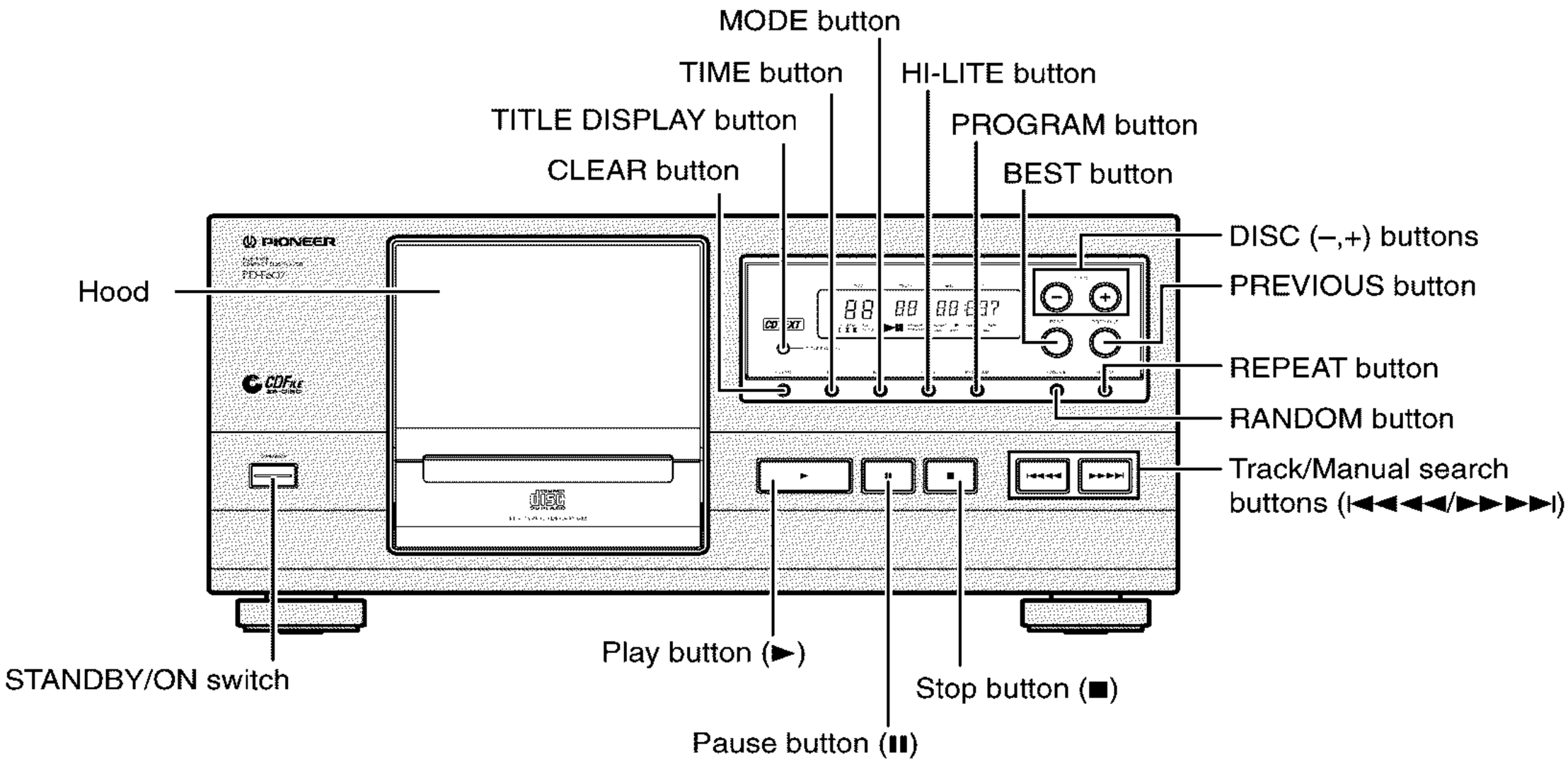
No.	Port Name	I/O	Description
1	EXCK	I/O	Sub code IF/shift clock I/O terminal
2	XBSO	I	Sub code IF/data input terminal
3	SCOR	I	Sub code IF/block sync input terminal
4	WFCK	I	Sub code IF/frame sync input terminal
5	MCK	I	Clock input terminal (16.9344MHz)
6	XMODE	I	System reset & power down mode setting input terminal
7	GND	–	GND
8	TEST	I	Test terminal (grounded)
9	SW1	I	“EXCK” input/output setting terminal(“L”: Clock output, “H”: Clock input)
10	SW2	I	“EXCK” clock output pulse width selection(“L”: X2 speed, “H”: Normal speed)
11	SCLK	I	Microcomputer IF/sShift clock input terminal
12	SRDT	O	Microcomputer IF/data output terminal
13	DQSY	O	Microcomputer IF/read-out permission output terminal
14	VDD	–	Power supply

7.2 BLOCK DIAGRAM

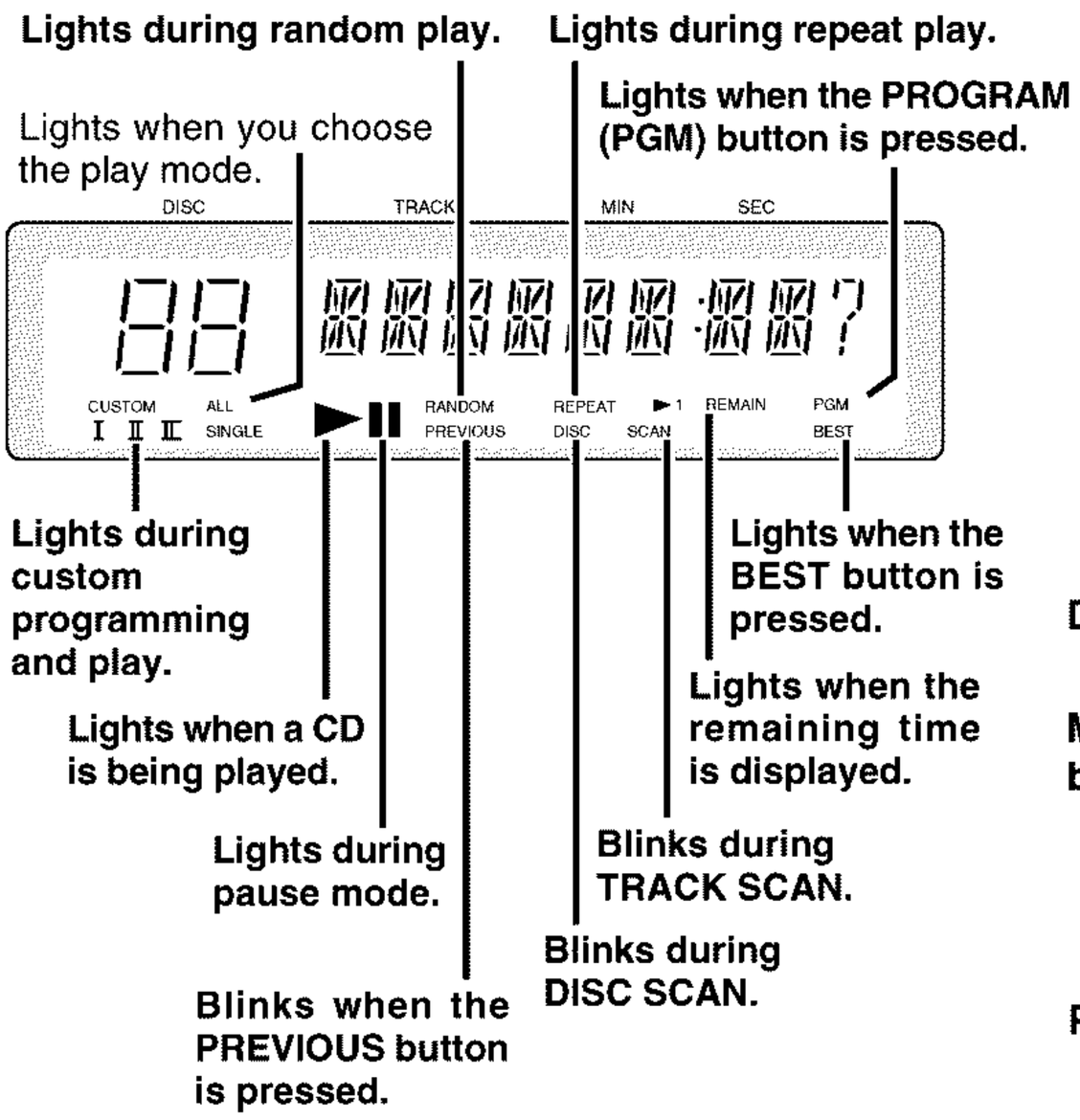


8. PANEL FACILITIES AND SPECIFICATIONS(PD-F607 only)

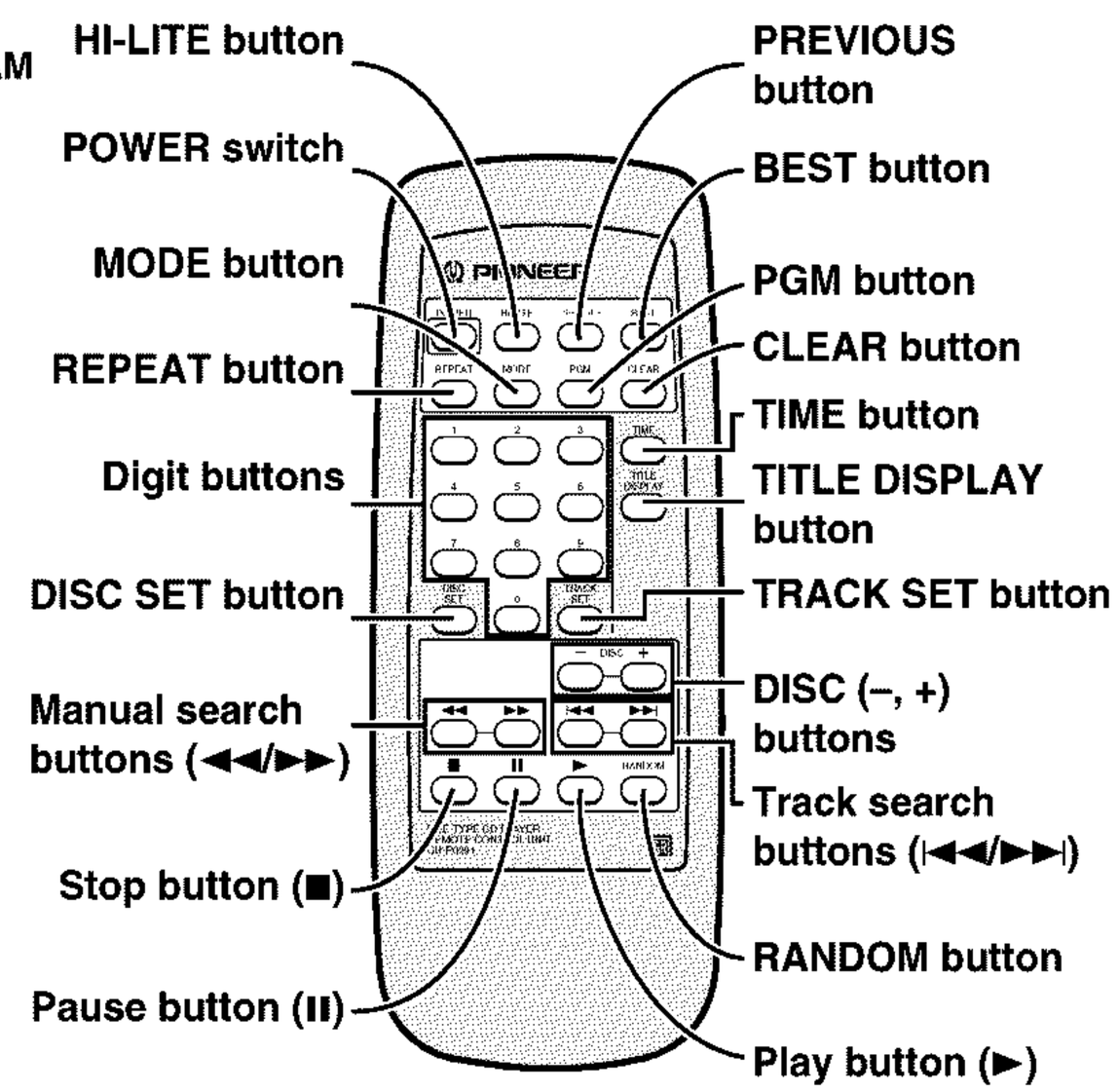
■ FRONT PANEL



■ DISPLAY



■ Rwmote Control Unit



■ SPECIFICATIONS

1. General

Type ..... Compact disc digital audio system
Power requirements
..... AC 120V, 60 Hz
Power consumption
..... 11W
Operating temperature ..... +5°C - +35°C
(+41°F - +95°F)
Weight (without package) ..... 4.8 kg (10 lb 9 oz.)
External dimensions ..... 420(W) x 312(D) x 193(H) mm
16-9/16(W) x 12-5/16(D) x 7-1/2(H) in.

2. Audio section

Frequency response ..... 2 Hz - 20 kHz
Level difference between channels ..... 1.0 dB or less (EIAJ)
Output voltage ..... 2 ± 0.3 Vrms (EIAJ)
Wow and flutter ..... less than ±0.001 % (W.PEAK)
(below measurable level) (EIAJ)
Channels ..... 2-channel (stereo)

3. Output terminal

Audio line output
Control input/output jacks
Optical digital output jack(PD-F607,F507 only)

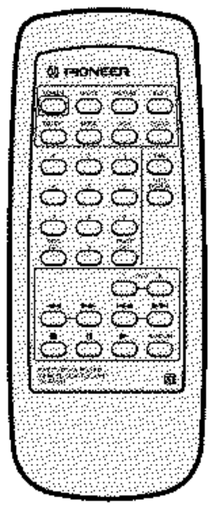
4. Accessories

Remote control unit(PD-F607,F507 only) 1
Size AA/R6P dry cell batteries(PD-F607,F507 only) 2
Output cable 1
Control cable 1
Operating instructions 1

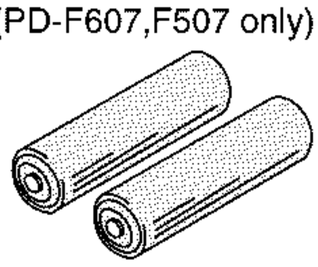
NOTE:
Specifications and design subject to possible modification without notice, due to improvements.

■ ACCESSORIES

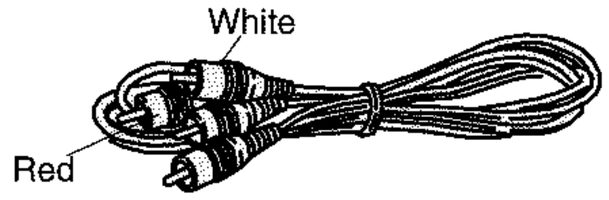
Remote control unit x 1
PWW1131(PD-F607)CU-PD091
PWW1132(PD-F507)CU-PD090



SizeAA/R6P dry cell batteries x 2
(PD-F607,F507 only)



Output cable x 1
(L=1.0m)
PDE1248



Control cable x 1
(L=1.0m)
PDE1247